

HAZARDOUS  
SITE  
EVALUATION  
DIVISION

## Field Investigation Team Zone II



CONTRACT NO.  
68-01-7347

**ecology and environment, inc.**

International Specialists in the Environment



R00127756  
RCRA RECORDS CENTER

Final Report  
Environmental Priorities Initiative  
Preliminary Assessment  
Big Woods Auto  
Cedar Falls, Iowa  
TDD #F-07-9004-010 PAN #FIA0263RA  
Site #T43 Project #001  
Prepared by: E & E/FIT for Region VII RPO  
FIT Task Leader: Wesley McCall  
Superfund Contact: Pete Culver  
RCRA Contact: Pat Frey  
Date: April 16, 1991

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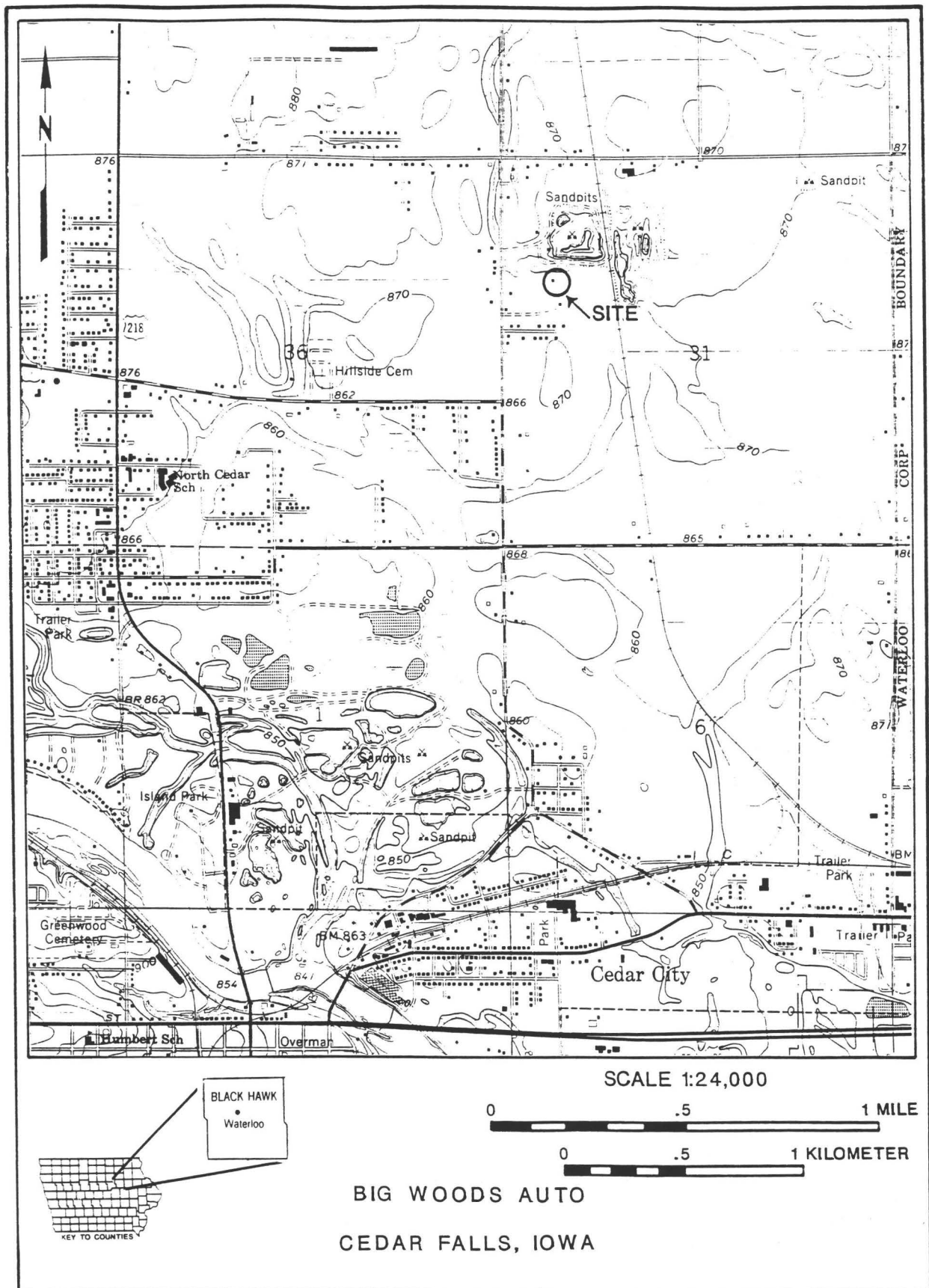


## SECTION 1: INTRODUCTION

As part of the United States Environmental Protection Agency's (EPA) Environmental Priorities Initiative (EPI) program, EPA has requested Ecology and Environment, Inc., Field Investigation Team (E & E/FIT) to conduct an EPI Preliminary Assessment of the Big Woods Auto site (BWA) located in Cedar Falls, Iowa (Figure 1-1).

The EPI program integrates the Resource Conservation and Recovery Act of 1976 (RCRA) the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA) in order to set priorities for the cleanup of the most environmentally significant sites first. This EPI Preliminary Assessment is essentially equivalent to RCRA's Preliminary Review/Visual Site Inspection and identifies potential or actual releases at the facility and determines if remedial measures are necessary.

This report discusses information obtained from the RCRA/Iowa branch files and describes each regulated Solid Waste Management Unit (SWMU). Observations obtained from the VSI conducted by E & E/FIT on May 15, 1990, are included along with site-specific information concerning the physical and environmental setting. Appendix A consists of EPA's Preliminary Assessment Form 2070-12.



Prepared by Wesley McCall  
Ecology & Environment/FIT July, 1990

Waste Site Tracking #IA0263  
Source: USGS 7.5' Cedar Falls, IA Quad. 1980

Figure 1-1: SITE LOCATION MAP

## SECTION 2: SITE BACKGROUND

### 2.1 SITE LOCATION

The BWA facility is located at 3305 Big Woods Road, Cedar Falls, Black Hawk County, Iowa. This location coincides with a portion of the W 1/2 of the NW 1/4 of Section 31, Township 90 North Range 13 West; the approximate coordinates of the site are 42°33'56.4" North Latitude and 90°26'01.2" West Longitude (Figure 1-1, Appendix B). The facility is just west of the Illinois-Central Railroad and south of a large sandpit pond created by a defunct quarry operation (Figure 1-1). The Waterloo Municipal Airport is approximately one mile east-southeast of the site.

### 2.2 SITE DESCRIPTION

The E & E/FIT conducted the VSI of the BWA site on May 15, 1990, in coordination with RCRA and site officials. Personnel on site were FIT members Wesley McCall, team leader, Otavio Silva, and Debbie Fischer; RCRA representative Pat Frey; Melvin Cunningham, site owner; and Ron Coffman of Coffman's Body Shop. A letter notifying Cunningham of the proposed date of the VSI and requesting information regarding any Solid Waste Management Units (SWMUs) was mailed on May 4, 1990 (Appendix C). The VSI was conducted in level D personal protection.

The BWA site encompasses 11.8 acres of nearly level land previously used for row crop production (EPA 1989). There are four buildings on site which are currently in use (Figure 2-1). One is used for an auto shop and also has office space. The other three buildings are used for storing used auto parts and some building materials. Two of these buildings are old mobile homes; one is a prefabricated metal building that once was used as a car wash at another location. Cunningham has planted pine trees around much of the site perimeter which conceal the junked autos stored east of the buildings.

The drums of paint waste were stored east of the buildings on nearly level ground along the north side of the access road (Figure 2-1). This SWMU measures approximately 35 feet by 38 feet in area and

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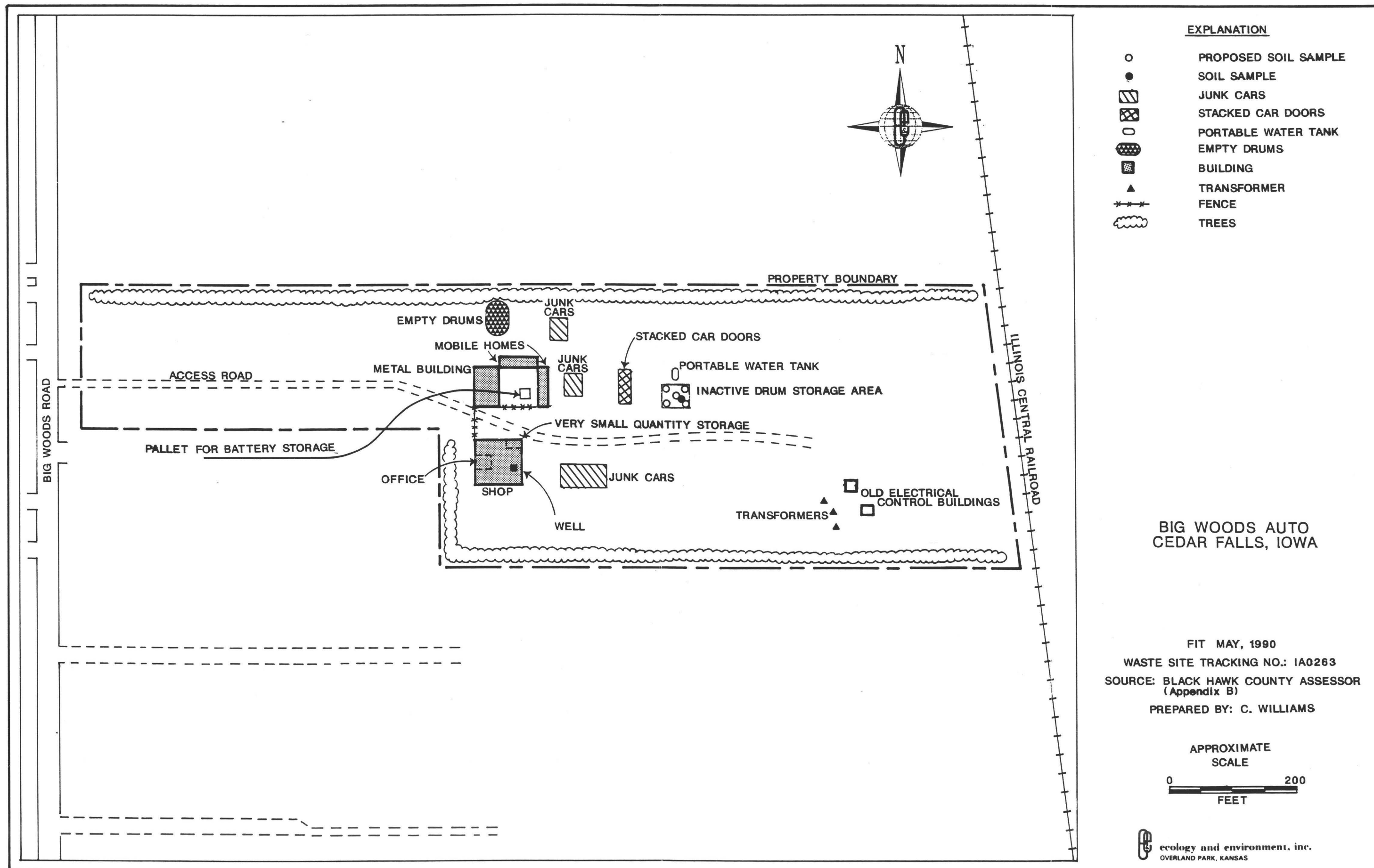


FIGURE 2-1 : SITE SKETCH MAP  
2-2

consists only of the designated ground surface. An old mobile water tank is parked at the north side of this area. The drums once stored in the drum storage area are now empty and are stacked north of the metal building and mobile homes (Figure 2-1).

One soil sample was collected from the drum storage area during the inspection of February 1987. The location of this sample is depicted on Figure 2-1. Analysis was conducted by National Environmental Testing, Inc. of Cedar Falls. No contamination was reported.

Three transformers and two small free-standing metal buildings are located on the southeast section of the property. These formerly housed transformers and electrical control equipment which was replaced during the recent upgrade of the runway lighting system at the neighboring Waterloo Municipal Airport. Cunningham has a wooden pallet on site for storing lead-acid batteries; no batteries were on site during the VSI. A small area in the northeast corner of the shop is designated for storing very small quantities of miscellaneous waste fluids; less than 20 gallons of any one waste fluid is generated produced annually.

### 2.3 SITE CONTACTS

The owner of the Big Woods Auto facility is Melvin D. Cunningham. The paint wastes (paint and paint solvents) stored at Big Woods Auto were generated by Coffman's Body Shop, which is owned by Ron Coffman. The paint wastes stored at BWA were transported off site by Larsen Oil Company to its permitted facility in Faribault, Minnesota. Dale Sweet of Larsen Oil received the transported wastes (EPA 1987-1989, #04).

Melvin D. Cunningham  
Owner, Big Woods Auto  
Sunrise Terrace, RR 2  
Waverly, Iowa 50677  
Telephone: 319-987-2638

Big Woods Auto  
(EPA ID #IAD981711948)  
3305 Big Woods Road  
P.O. Box 981  
Cedar Falls, Iowa 50613  
Telephone: 319-277-4324

Ron Coffman, Owner  
Coffman's Body Shop  
(EPA ID #IAD981708001)  
1906 State Street  
Cedar Falls, Iowa 50613  
Telephone: 319-277-3288

Larsen Oil Company  
(EPA ID #MND980990667)  
311 Fowler  
Faribault, Minnesota 56001  
Telephone: 507-625-8130



## SECTION 3: SITE BACKGROUND

### 3.1 GENERAL HISTORY AND WASTE MANAGEMENT PRACTICES

#### 3.1.1 General History

Cunningham purchased the BWA property in 1971 from Raymond Aneweer of 3312 Big Woods Road, Cedar Falls, Iowa. Aerial photographs indicate that it previously was used only for row crop production (EPA 1989). Cunningham acquired his first license for an auto salvage operation in 1980. He currently has a Cedar Falls Business license (#30) and is also an Iowa Department of Transportation (IDOT) Registered Motor Vehicle Dealer (#D02918). These licenses are valid for the current year. Cunningham's primary work at this site is auto salvage and used parts sales.

The on-site buildings were erected over a period of several years. The prefabricated metal building used for storage was used as a car wash at another location. This building was set up on site in 1973-74. Construction on the shop building was begun in 1980 and continued for three to four years. The two mobile homes were brought on site in 1983 and are used for storing used auto parts and building materials. The fencing and gate at the entrance were added in the spring of 1989.

The drummed paint waste was brought on site from Coffman's Body Shop in two episodes. The first pickup truck load of drums was brought on site in March 1983, about two months after a fire occurred in a furniture store adjacent to Coffman's shop. During the fall of 1985 Coffman relocated his body shop to its current location; the second load of drums was brought to BWA at that time. According to Cunningham, the drums were randomly placed at the storage location, not grouped separately (Figure 2-1). Neither Coffman nor Cunningham could recall the number of drums brought to the site during each episode. The waste paint and solvents were consolidated into 10 drums and manifested off site on February 17, 1987. The emptied drums were stacked north of the metal building and mobile homes.

BWA was assigned the temporary EPA ID #IAP000000128 on February 19, 1987, and permanent EPA ID #IAD981711948 on March 18, 1987. No Part A or Part B Permits have been issued to this facility.

### **3.1.2 Historical Waste Management Practices**

The 31 drums of paint waste from Coffman's Body Shop were stored on site temporarily, and the storage was a one-time occurrence. All the drums were stacked directly on the ground surface and the area had no containment. The drum contents ranged from nearly full to empty; some were stored upright and some were lying on their sides. It is possible that the contents of some of the drums spilled, but there was no clear evidence of spills or leaks at the time of the Compliance Evaluation Inspection on February 11, 1987.

### **3.1.3 Current Waste Management Practices**

A two- by five-foot area on the concrete floor in the northeast corner of the shop is designated as a waste storage area for the small quantities of oil, antifreeze, and paint thinner generated on site. There are specific sealed and labeled containers for each of the waste fluids. A bag of sorbent granules is kept on hand for containing any small spills. Less than 20 gallons of waste oil and antifreeze are generated per year. The waste oil is recycled through local auto service stations and the antifreeze is re-used. Less than two gallons per year of waste paint thinner (F003 and F005) are generated at this facility. The lead-acid batteries (D008) which are intermittently stored on site are recycled through Max Rotman Inc., Scrap Iron and Metal in Cedar Falls.

There are no processes conducted on site to produce other hazardous wastes.

## **3.2 NON-REGULATORY PAST INVESTIGATIONS**

During the interview associated with the VSI, Cunningham said that he had recently attended a waste management seminar in Waterloo, Iowa. This seminar was conducted jointly by the Iowa Waste Reduction Center, Region VII EPA and the Iowa Department of Natural Resources (IDNR). During this seminar Cunningham requested that the Iowa Waste Reduction

Center inspect the BWA facility. Kim Gunderson of the Iowa Waste Reduction Center conducted this inspection on May 11, 1990. Existing EPA files contain no records of non-regulatory inspections at the BWA site.

### 3.3 PERMIT AND REGULATORY ACTIONS SUMMARY

BWA has not filed for Part A or Part B permits. Temporary EPA ID# IAD0000000128 was assigned on February 19, 1987; permanent EPA ID# IAD981711948 was assigned on March 18, 1987. Following is a summary of the regulatory actions associated with the BWA site regarding the storage of waste paint related materials generated by Coffman's Body Shop. The EPA file document number is noted in brackets.

<u>DATE</u>	<u>ACTION</u>
2/11/87	BWA inspected by David Whiting of EPA; Notice of Violation cited 17 violations in relation to storing 31 drums of auto paint wastes and waste thinners; RCRA wastes F003 and F005. [01]
2/17/87	Paint wastes consolidated into 10, 55-gallon drums and manifested off site as D001 waste by Larsen Oil Company of Faribault, Minnesota, under State manifest #MNO039548. This permitted facility is assigned EPA ID# MND980990667. [01A]
2/19/87	EPA assigned temporary EPA ID# IAD0000000128 to Big Woods Auto.
2/27/87	RCRA inspection report submitted to Cunningham, outlining citations noted in Notice of Violation. An Interim Status Checklist and several photographs of the site were attached. At this time, Cunningham was starting the salvage yard operation; no waste oil was generated or accumulated, and there was no solvent parts washer on site. [03]
3/18/87	Cunningham submitted to EPA Notification of Hazardous Waste Activity, Form 8700-12. Permanent EPA ID# IAD981711948 was assigned to BWA as storer of F003 waste. [06]
3/31/88	EPA Regional Counsel files 3008(a); Complaint, Compliance Order and Notice of Opportunity for Hearing. A penalty of \$20,251 is assessed against BWA for cited violations. [12]

4/25/88           Cunningham requested withdrawal of storer status. [13B]

10/13/88           Sampling and analysis plan for Closure of former drum storage area prepared by Robert J. Dieter, attorney for BWA. [38] EPA found plan to be insufficient. EPA representative Kloeckner on 11/1/88 submitted to Dieter a request for additional information regarding sampling, decontamination, and analytical procedures. [32]

12/8/88            Consent Agreement/Order for Signature submitted by EPA to Cunningham asserting EPA's right to continue monitoring site activities, specifying Respondents responsibilities and liabilities for Closure, and detailing penalties. [34]

2/14/89            Revised Closure Plan for BWA is submitted as part of the Closure Plan for the Coffman Body Shop. BWA Closure Plan proposes that five samples be collected from each corner and from the center of the rectangular 35- by 38-foot former drum storage area. The samples are to consist of 2-inch-diameter soil cores collected from surface to 6 inches. BWA proposes to conduct sampling, with oversight by Cedar Falls City Engineer, to assure chain-of-custody and delivery to an EPA-approved laboratory in Cedar Falls. Pertinent sample storage and preservation protocols will be followed. [38]

2/17/89            EPA sends memo to Cunningham regarding settlement of civil penalty. [39]

3/15/89            RCRA conducts inspection of BWA; no areas of non-compliance are cited. Though several empty drums with no tops were tipped over on their sides, no drums containing waste material were observed on the property. The inspection report was sent to Cunningham on 4/6/89. [40]

5/3/89             Black Hawk County Attorney sends memo to EPA reporting that no Pollution Liability insurance is available. [41]

5/4/90             EPA sends to Cunningham a letter (3007), requesting information regarding SWMUs, and notifying him of the impending Visual Site Inspection (Appendix C).

5/16/90            Cunningham gave his written response to the 3007 letter to RCRA representative Pat Frey when the VSI was conducted (Appendix C).

The Closure Plan submitted for the former drum storage area on the Big Woods property had not been approved by the EPA at the time of this report.

## SECTION 4: ENVIRONMENTAL SETTING

### 4.1 CULTURAL AND ENVIRONMENTAL SETTING

Following is a brief list of the cultural developments, parks and wildlife areas, and other natural resources in the site vicinity. This information is taken from the USGS 1980 Cedar Falls 7.5 minute topographic map; it is not comprehensive.

#### Local Cultural Developments

Sartori Hospital, Cedar Falls	2.5 mi. southwest
Church	1.1 mi. south-southwest
Waterloo Municipal Airport	1.1 mi. east
University of Northern Iowa, Cedar Falls	3.6 mi. southwest
North Cedar School	1.1 mi. southwest

#### Parks and Wildlife Areas

George Wyth Memorial State Park	1.9 mi. southeast
Black Hawk Park (municipal)	2.1 mi. west
(both are riparian parks on Cedar River)	

#### Surface Water

Cedar River	1.9 mi. south
Fobian Pond (private)	~400 feet north

#### Ground Water

Residential well	~400 feet north
Municipal wells	
Cedar Falls (closest)	1.3 mi. west
Waterloo	~4 mi. southeast
Industrial well	
BWA on site well	on site
(off site unknown)	

The 1-year, 24-hour rainfall for Cedar Falls is approximately 2.75 inches. Annual precipitation usually totals 32 inches. The mean annual lake evaporation is 34 inches. The prevailing wind in Dubuque is from the north at 10 mph; in Davenport winds prevail from the east at 10 mph (EPA 1984; U.S. Department of Commerce).

Big Woods Auto is situated in the sparsely populated northeastern corner of Cedar Falls. Approximately 30 homes are located within 1/4 mile of the site; all local residents use private wells for drinking water (E & E 1990). Most of these are sandpoint wells that are less than 30 feet deep. Small residential areas adjoin the site but much of

the land in the vicinity is used for row crop production. The abandoned Black Hawk Waste Disposal landfill lies immediately east of the site. The urban areas of Cedar Falls, population 32,460, are approximately two miles south of the site. Urban areas of Waterloo, population 68,050, are about four miles southeast (U.S. Department of Commerce 1979).

#### 4.2 TOPOGRAPHY AND DRAINAGE

The site is situated on the floodplain of the Cedar River. The relief on the floodplain is low and irregular (Figure 1-1). An aerial photo analysis of the site vicinity was conducted by the Environmental Monitoring Systems Lab (EPA 1989). Aerial photos of the area were taken over the period 1937 to 1983. The area is transected by semi-circular ground moisture patterns which are associated with relict river meander scars. The Cedar Falls 7.5 Minute topographic map (USGS 1980) shows at least three intermittent streams which flow from the hills north and east of the site into one of the meander scars (Figure 1-1). Both the topographic map and the aerial photos reveal that this relict meander terminates approximately 2,000 feet south-southeast of the site. At least two of the aerial photos, including the infrared photo of May 8, 1983, show standing water in the meander scar.

Poor development of local surface drainage suggests that runoff water will percolate through the soil into the local alluvial aquifer.

#### 4.3 SOILS

The BWA site lies on Finchford series soils, which are formed on coarse-textured water-deposited materials (USDA 1978). The surface layer to 18 inches deep is a brown, loamy sand; the subsoil comprises coarse sand and fine gravel. Finchford soils have a low capacity for retaining water, and a low organic content. These soils have a very high permeability, probably greater than  $10^{-3}$  cm/sec in the coarse sand and gravels (EPA 1984).

#### 4.4 STRATIGRAPHY

A stratigraphic column was prepared from logs of several wells in the site vicinity (Figure 4-1). Well logs A through E, which were used to construct this generalized column, are included in Appendix D.

Quaternary sands and gravels, as well as pleistocene tills, comprise the local alluvial aquifer which unconformably overlies the Cedar Valley limestone. This limestone forms the upper portion of the regionally important Silurian-Devonian aquifer (IGS 1984). The alluvial/till deposits and the Silurian-Devonian carbonates are the primary aquifers of this area. According to local well logs, there is no clay or shale layer separating the alluvial deposits from the Silurian-Devonian aquifer, suggesting that the two aquifers are hydraulically connected. The Maquoketa shale, a regionally extensive aquitard, underlies the Silurian-Devonian aquifer and separates it from the deeper Ordovician aquifer. A detailed discussion of the stratigraphic column is included with well logs in Appendix D.

Logs of shallow wells F, G, H, I, and J more specifically define subsurface conditions beneath the site. Wells H and I (SW 1/4, NE 1/4, NE 1/4, SE 1/4 of Section 11, T89N, R14W; and NE 1/4, NW 1/4, NE 1/4, NE 1/4 of Section 29, T90N, R13W) lie on the low Cedar River bluffs south and north of the site respectively. These two wells penetrate 80 to 100 feet of glacial till overlying the Devonian-age Cedar Valley Formation. Three of the shallow wells (F, G, and J) lie within the Cedar River valley. No shallow samples were collected in well G to verify the thickness of till and alluvium at this location. This well is located approximately 3.5 miles southeast of the site (NE 1/4, SE 1/4 of Section 9, T89N, R13W) and penetrates to a total depth of 204 feet. Well G penetrates the Cedar Valley Formation and bottoms in the Devonian-age Wapsipinicon Formation. Wells J and F penetrate 85 feet and 54 feet respectively of recent alluvium and till, and bottom in the underlying Cedar Valley Formation. Well J is located approximately 1.3 miles northwest of the site (NW 1/4, SW 1/4, SW 1/4 of Section 25, T90N, R14W) and well F is located approximately 2.3 miles southeast of the site (N 1/4, NE 1/4, SE 1/4 of Section 5, T89N, R13W).

#### 4.5 GROUND WATER

The BWA site is underlain by the alluvium and till deposits that comprise the local alluvial aquifer. Geologic and soil conditions in this area suggest that any contamination originating from the site would affect the local alluvial aquifer and, possibly, the Silurian-Devonian



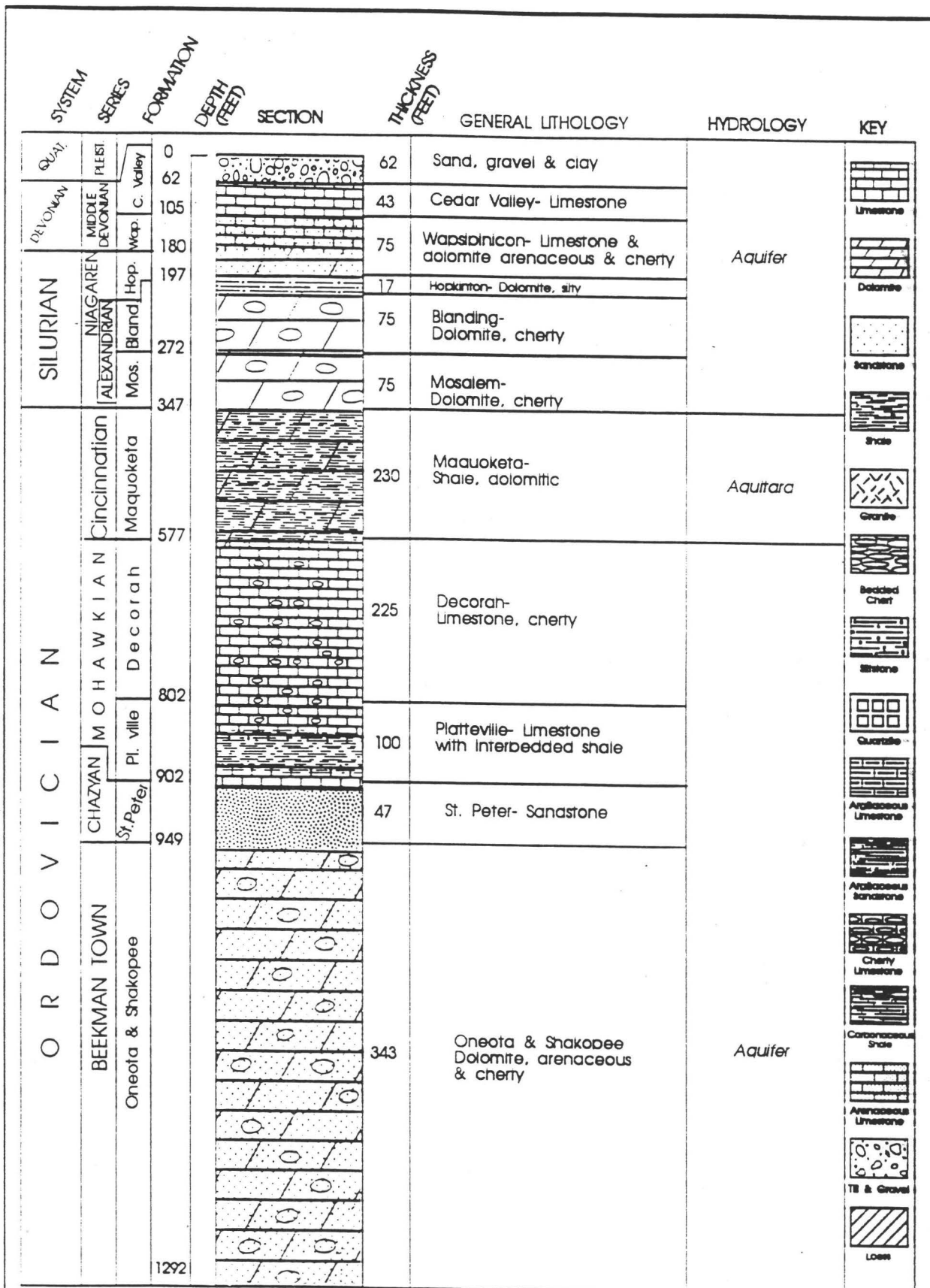


Figure 4-1: GENERALIZED STRATIGRAPHIC COLUMN

aquifer. Municipal well logs of Cedar Falls Waterloo Iowa (Appendix D, wells E, G, K, L, M, and N) reveal that the city water supplies are withdrawn from the Silurian-Devonian aquifer. Most of the municipal wells for these two cities, which together represent a target population of over 100,000 residents, are located within approximately four miles of the site.

A map of the potentiometric surface of the Silurian-Devonian aquifer was completed by the Iowa Geological Survey in 1984. This potentiometric surface indicates that ground water flow in the vicinity of BWA is south-southeast. Local residential wells and downgradient Cedar Falls and Waterloo municipal wells may be threatened by possible contamination originating from the BWA site.

Site-specific ground water flow in the shallow alluvial aquifer may be influenced by the relict stream channels, seen as meander scars in the aerial photos. Field work at the adjacent Black Hawk Landfill and interviews with local residents (Fobian 1989; Hansen 1989) indicate that the local depth to ground water may be as little as 12 to 15 feet. Most local residents obtain potable water from shallow sandpoint wells finished at 15 to 30 feet in the alluvial aquifer. During the on-site interview associated with the VSI, Cunningham said he had a sandpoint well at the back of his shop. The well was originally emplaced at a depth of 20 feet and had a standing water level of 17 feet. The depth of the well increased to 24 feet in the summer of 1989, due to drought conditions.

## **SECTION 5: DESCRIPTION OF INDIVIDUAL SOLID WASTE MANAGEMENT UNITS (SWMUs)**

### **5.1 DRUM STORAGE AREA (Inactive, Submitted for Closure )**

#### **5.1.1 Information Summary**

##### **Unit Description**

This SWMU is a 35- by 38-foot area on the ground surface; its approximate location is depicted on Figure 2-1. Thirty-one drums of waste paint related materials were stored directly on the ground. No pallets were used.

##### **Dates of Operation**

The first group of drums was brought on site in March 1983 and the second group was brought on site in the Fall of 1985. The paint waste drums were manifested off site on February 17, 1987, by Larsen Oil Company to its permitted facility in Faribault, Minnesota (EPA ID# MND980990667).

##### **Wastes Managed**

Waste paint stored at this SWMU contained heavy metals (D007, D008) and waste paint thinner (F003, F005) generated by Coffman's Body Shop. The paint and solvet were probably mixed. Material Safety Data Sheets (MSDSs) for some of these materials are attached (Appendix E).

##### **Release Controls**

No release controls or containment features were utilized at this unit.

##### **History of Releases**

No releases have been documented. However, some of the drums were found to be open during the CEI of February 11, 1987, and some were lying on their sides.

### **5.1.2 Further Information Needs**

The Closure Plan for this SWMU is included in the Closure for Coffman's Body Shop (EPA ID# IAD981708001). The Closure Plan has not yet been approved. Sampling under Closure should indicate whether a release(s) has occurred, and the extent of contamination. This sampling and associated photographic documentation should satisfy any further information needs for this unit.

## **5.2 AREAS OF CONCERN**

### **5.2.1 Transformer Storage Area**

Three empty transformers are stored on the ground surface on the southeast portion of the property (Figure 2-1). These transformers were brought on site from the Waterloo Municipal Airport in May 1989 and were present during this VSI. According to the gauges on the transformers, they are empty of dielectric oil, and the labels indicate that the dielectric oil had been tested for polychlorinated biphenyls (PCBs) and were found to contain less than 50 parts per million PCBs. Cunningham indicated that Perry Wolfensperger, Waterloo airport, handled the disposal of the dielectric oil before the transformers were brought to BWA. No stressed vegetation or other indications of releases from the transformers were observed during the VSI. During a brief telephone interview with the FIT, Wolfensperger said that the dielectric oil from the transformers had been disposed of properly (Appendix F).

Photographic documentation during closure would complete any further information needs for this area of concern.

### **5.2.2 Lead-Acid Battery Storage Area (D008)**

This storage area for junked automotive batteries consists of a pallet on the ground surface (Figure 2-1). No batteries were present during the VSI. Cunningham indicated that this area had been used for storing batteries intermittently since about 1980. Batteries are recycled through Max Rotman Inc., Scrap Iron and Metal in Cedar Falls. There was no visible evidence of release(s) from this area during the VSI. Photographic documentation during closure would complete any further information needs for this area of concern.

### 5.2.3 Empty Drum Storage Area

This storage area north of the mobile homes consists of 15 empty, open-top drums stacked on their sides on the ground surface (Figure 2-1). These were drums left on site after the waste paint related materials were consolidated into 10 drums and manifested off site. There was no evidence of release(s) from this area.

Photographic documentation during closure would complete any further information needs for this area of concern.

## SECTION 6: SUMMARY OF SITE VISIT

The Big Woods Auto site encompasses approximately 11.8 acres in the sparsely populated northeast section of Cedar Falls, Iowa. Melvin Cunningham owns the property and operates this small auto salvage operation part-time. A letter notifying Cunningham of the proposed date of the VSI and requesting information concerning waste management and storage practices on site was mailed approximately two weeks before the inspection. Cunningham hand delivered his response to RCRA representative Pat Frey during the VSI (Appendix C).

Cunningham has made several improvements at the site since purchasing the property in 1971. He has planted trees around the property to conceal the junked autos from view, erected four buildings, and emplaced a gated entrance.

During the VSI the FIT observed an area inside the shop designated for storing very small quantities of waste fluids generated on site; waste oil, waste antifreeze, and less than one gallon of waste thinner. The FIT also surveyed the inactive drum storage area, transformer storage area, lead-acid battery storage area, and the location where the empty paint waste drums are currently stored (Figure 2-1). There was no visible evidence of release(s) from any of these areas.

Ron Coffman, of Coffman's Body Shop, arrived on site before the VSI commenced. According to Coffman, he was assuming financial responsibility for closure of the Drum Storage Area at BWA. Due to a camera malfunction photographs taken during the VSI did not develop properly. Therefore, no site photographs are available.

## SECTION 7: SUMMARY

The E & E/FIT was tasked under the U.S. EPA's Environmental Priorities Initiative program to conduct a background review and VSI of the Big Woods Auto site in Cedar Falls, Iowa. The VSI was conducted on May 15, 1990, in coordination with RCRA and company officials. The FIT personnel were Wesley McCall, Otavio Silva, and Debbie Fischer; RCRA representative Pat Frey also was present for the VSI. Melvin Cunningham, owner of BWA, conducted the tour of the facility. Ron Coffman of Coffman's Body Shop was also present.

BWA is a small auto salvage operation, no materials are manufactured on site and no industrial processes are conducted. Small quantities of waste fluids such as oil, antifreeze, and paint thinner are generated. These are stored in a designated area. Lead-acid batteries are stored intermittently on site and are recycled through a local scrap metal dealer. Waste oil is recycled through local service stations, and waste antifreeze is reused. Cunningham recently attended a Waste Management seminar in Waterloo, Iowa, jointly conducted by the Iowa Waste Reduction Center (IWRC), EPA and IDNR. During this seminar Cunningham requested that IDNR conduct an inspection of his facility. This inspection was conducted by Kim Gunderson of IWRC on May 11, 1990.

During the VSI the FIT observed one SWMU and three areas of concern. The SWMU is an inactive drum storage area located near the center of the site. This unit consists of an area of the ground surface approximately 35 feet by 38 feet in dimension. The three areas of potential concern are: 1) transformer storage area; 2) lead-acid battery storage area; and 3) empty drum storage area. The gauges on the transformers indicate that they are empty, and labels reveal that the dielectric oil contained less than 50 parts per million PCBs. Lead-acid batteries are stored for recycling only; none were in storage at the time of the VSI. There was no evidence of leakage or spills from the empty drums stacked north of the buildings.

A Closure Plan for the Drum Storage Area at Big Woods Auto has been submitted for approval. This plan was submitted as a part of the Closure Plan for Coffman's Body Shop (EPA ID# IAD981708001). The Closure



Plan proposes collecting five soil samples from the BWA drum storage area to define any potential releases. These soil samples are to consist of two-inch-diameter cores collected from 0 to 6 inches. Sampling procedures, preservation, and analyses are to be conducted in accordance with EPA SW-846 guidelines. Cunningham and Coffman are awaiting approval of the proposed Closure Plan before proceeding with closure activities. Once closure of the Drum Storage Area is certified, the Big Woods Auto site would be classified as a Conditionally Exempt Small Quantity Generator under RCRA (EPA 1986).

## SECTION 8: BIBLIOGRAPHY

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- Fobian, David and Linda, August 7, 1985, Complaint Letter to the EPA Concerning the Black Hawk Waste Disposal Landfill, Cedar Falls, Iowa.
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- Iowa Geological Survey, 1984, Miscellaneous Map Series 10: Silurian-Devonian Aquifer of Iowa, Iowa City, Iowa.
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- U.S. Environmental Protection Agency, August 1985 to September 1988, Site Files for Black Hawk Waste Disposal Site, Cedar Falls, Iowa, Site #D981497522.
- U.S. Environmental Protection Agency, 1986, Understanding the Small Quantity Generator Hazardous Waste Rules: A Handbook for Small Business, Washington, D.C., EPA/530-SW-86-019.
- U.S. Environmental Protection Agency, 1989, Aerial Photographic Analysis of the Black Hawk Waste Disposal Company Dump Site, Las Vegas, Nevada.
- U.S. Geological Survey, 1972, 7.5 Minute Series Topographic Map, Waterloo North Quadrangle, Iowa, Washington, D.C.
- U.S. Geological Survey, 1980, 7.5 Minute Series Topographic Map, Cedar Falls Quadrangle, Iowa, Washington, D.C.

APPENDIX A

EPA PRELIMINARY ASSESSMENT FORM 2070-12

BIG WOODS AUTO  
EPA ID# IAD981711948

TDD #F-07-9004-010  
PAN #FIA0263RA

<b>POTENTIAL HAZARDOUS WASTE SITE</b>						<b>I. IDENTIFICATION</b>	
<b>EPA PRELIMINARY ASSESSMENT</b>						<b>01 STATE</b> IA	<b>02 SITE NUMBER</b> D981711948
<b>PART 1 - SITE INFORMATION AND ASSESSMENT</b>							
<b>II. SITE NAME AND LOCATION</b>							
<b>01 SITE NAME</b> (Legal, common, or descriptive name of site) Big Woods Auto				<b>02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER</b> 3305 Big Woods Road			
<b>03 CITY</b> Cedar Falls				<b>04 STATE</b> IA	<b>05 ZIP CODE</b> 50677	<b>06 COUNTY</b> Black Hawk	<b>07 COUNTY CODE</b> 
<b>09 COORDINATES</b>							
<b>LATITUDE</b> 42° 33' 56.40" N		<b>LONGITUDE</b> 092° 26' 01.20" W					
<b>10 DIRECTIONS TO SITE</b> (Starting from nearest public road) From Cedar Falls take Big Woods Road north approximately 1.4 miles. The site is located on the east side of the road.							
<b>III. RESPONSIBLE PARTIES</b>							
<b>01 OWNER</b> (If known) Melvin D. Cunningham				<b>02 STREET</b> (Business, mailing, residential) Sunrise Terrace, Route 2			
<b>03 CITY</b> Waverly				<b>04 STATE</b> IA	<b>05 ZIP CODE</b> 50677	<b>06 TELEPHONE NUMBER</b> ( 319)987-2638	
<b>07 OPERATOR</b> (If known and different from owner) (same)				<b>08 STREET</b> (Business, mailing, residential)			
<b>09 CITY</b>				<b>10 STATE</b>	<b>11 ZIP CODE</b>	<b>12 TELEPHONE NUMBER</b> ( )	
<b>13 TYPE OF OWNERSHIP</b> (Check one) <input checked="" type="checkbox"/> A. PRIVATE <input type="checkbox"/> B. FEDERAL: _____ C. STATE <input type="checkbox"/> D. COUNTY <input type="checkbox"/> E. MUNICIPAL (Agency name) <input type="checkbox"/> F. OTHER: _____ G. UNKNOWN (Specify)							
<b>14 OWNER/OPERATOR NOTIFICATION ON FILE</b> (Check all that apply) <input checked="" type="checkbox"/> A. RCRA 3001 DATE RCVD: 03/18/87 <input checked="" type="checkbox"/> B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RCVD: _____ C. NONE MO/DAY/YR MO/DAY/YR							
<b>IV. CHARACTERIZATION OF POTENTIAL HAZARD</b>							
<b>01 ON SITE INSPECTION</b> BY(Check all that apply) <input checked="" type="checkbox"/> YES    DATE 05/15/90 <input checked="" type="checkbox"/> A. EPA <input checked="" type="checkbox"/> B. EPA CONTRACTOR <input type="checkbox"/> C. STATE <input type="checkbox"/> D. OTHER CONTRACTOR _____ NO <input type="checkbox"/> E. LOCAL HEALTH OFFICIAL <input type="checkbox"/> F. OTHER: _____ (Specify) CONTRACTOR NAME(S): Ecology and Environment, Inc.							
<b>02 SITE STATUS</b> (CHECK ONE) <input checked="" type="checkbox"/> A. ACTIVE <input type="checkbox"/> B. INACTIVE <input type="checkbox"/> C. UNKNOWN				<b>03 YEARS OF OPERATION</b> 1980    present    _____ UNKNOWN BEGINNING YEAR    ENDING YEAR			
<b>04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED</b> Automobile paint waste (D007, D008) and thinner (F003, F005).							
<b>05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION</b> Possible contamination of soil and ground water in local alluvial aquifer if leaks or spills occurred.							
<b>V. PRIORITY ASSESSMENT</b>							
<b>01 PRIORITY FOR INSPECTION</b> (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous conditions and incidents) <input type="checkbox"/> A. HIGH <input type="checkbox"/> B. MEDIUM <input checked="" type="checkbox"/> C. Low <input type="checkbox"/> D. NONE (Inspection required promptly)    (Inspection required)    (Inspect on time available basis)    (No further action needed. Complete current disposition form)							
<b>VI. INFORMATION AVAILABLE FROM</b>							
<b>01 CONTACT</b> Patricia Frey		<b>02 OF</b> (Agency/Organization) EPA/RCRA - Iowa			<b>03 TELEPHONE NUMBER</b> (913) 551-7627		
<b>04 PERSON RESPONSIBLE FOR ASSESSMENT</b> Wesley McCall		<b>05 AGENCY</b> E & E	<b>06 ORGANIZATION</b> FIT	<b>07 TELEPHONE NUMBER</b> (913) 432-9961		<b>08 DATE</b> 04/03/91 MO/DAY/YR	

**EPA**

## PRELIMINARY ASSESSMENT

01 STATE  
IA

02 SITE NUMBER  
D981711948

## PART 2 - WASTE INFORMATION

## II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

<p><b>01 PHYSICAL STATES</b> (Check all that apply)</p> <p><u>  </u> A. SOLID                      <u>  </u> E. SLURRY</p> <p><u>  </u> B. POWDER, FINES <u>  </u> X F. LIQUID</p> <p><u>  </u> X C. SLUDGE                  <u>  </u> G. GAS</p> <p><u>  </u> D. OTHER _____</p> <p>(Specify)</p>	<p><b>02 WASTE QUANTITY AT SITE</b> (Measures of waste quantities must be independent)</p> <p>TONS _____</p> <p>CUBIC YARDS _____</p> <p>NO. OF DRUMS <u>  10  </u></p>	<p><b>03 WASTE CHARACTERISTICS</b> (Check all that apply)</p> <p><u>  </u> X A. TOXIC                      <u>  </u> X E. SOLUBLE                      <u>  </u> I. HIGHLY VOLATILE</p> <p><u>  </u> B. CORROSIVE                  <u>  </u> F. INFECTIOUS                      <u>  </u> J. EXPLOSIVE</p> <p><u>  </u> C. RADIOACTIVE                  <u>  </u> X G. FLAMMABLE                      <u>  </u> K. REACTIVE</p> <p><u>  </u> X D. PERSISTENT                  <u>  </u> X H. IGNITABLE                      <u>  </u> L. INCOMPATIBLE</p> <p><u>  </u> M. NOT APPLICABLE</p>
--	---	--

### III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	500	gallons	auto paint waste and thinner
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

#### IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

[illegible]

## V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

**VI. SOURCES OF INFORMATION** (Cite specific references, e.g., state files, sample analysis, reports)

U.S. EPA, 1984 through 1989.  
E & E, 1990.  
Sax and Lewis, 1989.

## POTENTIAL HAZARDOUS WASTE SITE

## I. IDENTIFICATION

EPA

## PRELIMINARY ASSESSMENT

01 STATE  
IA02 SITE NUMBER  
D981711948

## PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

## II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☒ A. GROUND WATER CONTAMINATION 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☒ POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: &lt;200 04 NARRATIVE DESCRIPTION

Possibility that small amounts of paint wastes and thinners spilled, high permeability soils overlying high permeability shallow alluvial aquifer. Approximately 30 local residences on shallow wells. Wastes no longer on site.

01 ☐ B. SURFACE WATER CONTAMINATION 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_ 04 NARRATIVE DESCRIPTION

None known of or observed to date.

01 ☐ C. CONTAMINATION OF AIR 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_ 04 NARRATIVE DESCRIPTION

None known of or observed to date.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_ 04 NARRATIVE DESCRIPTION

None known of or observed to date.

01 ☐ E. DIRECT CONTACT 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_ 04 NARRATIVE DESCRIPTION

None known of or observed to date.

01 ☒ F. CONTAMINATION OF SOIL 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☒ POTENTIAL ☐ ALLEGED

03 AREA POTENTIALLY AFFECTED: &lt;0.1 04 NARRATIVE DESCRIPTION

(Acres)

Possibility that small amounts of paint wastes and thinners spilled from open drums stored on ground surface: no containment.

01 ☒ G. DRINKING WATER CONTAMINATION 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☒ POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: &lt;200 04 NARRATIVE DESCRIPTION

Possibility that small amounts of paint wastes and thinners spilled, high permeability soils overlying high permeability shallow alluvial aquifer. Approximately 30 local residences on shallow wells. Wastes no longer on site.

01 ☒ H. WORKER EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☒ POTENTIAL ☐ ALLEGED

03 WORKERS POTENTIALLY AFFECTED: \_\_\_\_\_ 04 NARRATIVE DESCRIPTION

Low probability that site owner/operator and workers that delivered wastes exposed to material in open drums. No other workers on site.

01 ☐ I. POPULATION EXPOSURE/INJURY 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_ 04 NARRATIVE DESCRIPTION

None known of or observed to date.

## POTENTIAL HAZARDOUS WASTE SITE

## I. IDENTIFICATION

EPA

## PRELIMINARY ASSESSMENT

01 STATE  
IA02 SITE NUMBER  
D981711948

## PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

## II. HAZARDOUS CONDITIONS AND INCIDENTS (CONTINUED)

01    J. DAMAGE TO FLORA 02    OBSERVED (DATE:           )    POTENTIAL    ALLEGED

## 04 NARRATIVE DESCRIPTION

None known of or observed to date.

01    K. DAMAGE TO FAUNA 02    OBSERVED (DATE:           )    POTENTIAL    ALLEGED

## 04 NARRATIVE DESCRIPTION (Include name(s) of species)

None known of or observed to date.

01    L. CONTAMINATION OF FOOD CHAIN 02    OBSERVED (DATE:           )    POTENTIAL    ALLEGED

## 04 NARRATIVE DESCRIPTION

None known of or observed to date.

01    X M. UNSTABLE CONTAINMENT OF WASTES 02    X OBSERVED (DATE: 02/11/87)    POTENTIAL    ALLEGED

(Spills/runoff/standing liquids/leaking drums)

03 POPULATION POTENTIALLY AFFECTED: unknown 04 NARRATIVE DESCRIPTION

Drums of paint wastes and thinners stored on ground surface, some were open and tipped over. Wastes manifested off site on 2/17/87.

01    N. DAMAGE TO OFF-SITE PROPERTY 02    OBSERVED (DATE:           )    POTENTIAL    ALLEGED

## 04 NARRATIVE DESCRIPTION

None known of or observed to date.

01    O. CONTAMINATION OF SEWERS,  
STORM DRAINS, WWTPs 02    OBSERVED (DATE:           )    POTENTIAL    ALLEGED

## 04 NARRATIVE DESCRIPTION

None known of or observed to date.

01    P. ILLEGAL/UNAUTHORIZED DUMPING 02    OBSERVED (DATE:           )    POTENTIAL    ALLEGED

## 04 NARRATIVE DESCRIPTION

None known of or observed to date.

## 05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None known of or observed to date.

III. TOTAL POPULATION POTENTIALLY AFFECTED: unknown

## IV. COMMENTS

The Big Woods Auto facility is a small auto salvage facility, operated on a part-time basis by the owner/operator. Present on site waste management practices are very good. The closure plan has yet to be approved. Once approved and sampling of the drum storage area is completed the analytical results should indicate if any further work is needed.

## V. SOURCES OF INFORMATION (Cite specific references. e.g., state files, sample analysis, reports)

USDA 1978.  
USGS 1980.  
U.S. EPA 1984.  
U.S. EPA 1987-1989.



APPENDIX B

SITE PLAT MAPS

(Source: Black Hawk County, Iowa)

BIG WOODS AUTO  
EPA ID# IAD981711948

TDD #F-07-9004-010  
PAN #FIA0263RA

2-30E

W. DUNKERTON ROAD

I.C.R.R.

100+00

2-31B

N

1-25

BIG WOODS ROAD

BIG WOODS RD

ALL DIMENSIONS ARE  
TO SECTION LINE  
UNLESS OTHERWISE  
NOTED

AERIAL PHOTOGRAPHY  
APRIL, 1982

PROPERTY DATA  
RECEIVED FROM  
10-11-1982

THIS MAP WAS PREPARED  
FROM AERIAL PHOTOGRAPHY  
AND FIELD SURVEY DATA  
AND IS NOT TO BE USED  
FOR RECORDING PURPOSES  
UNLESS OTHERWISE  
NOTED

2-31A

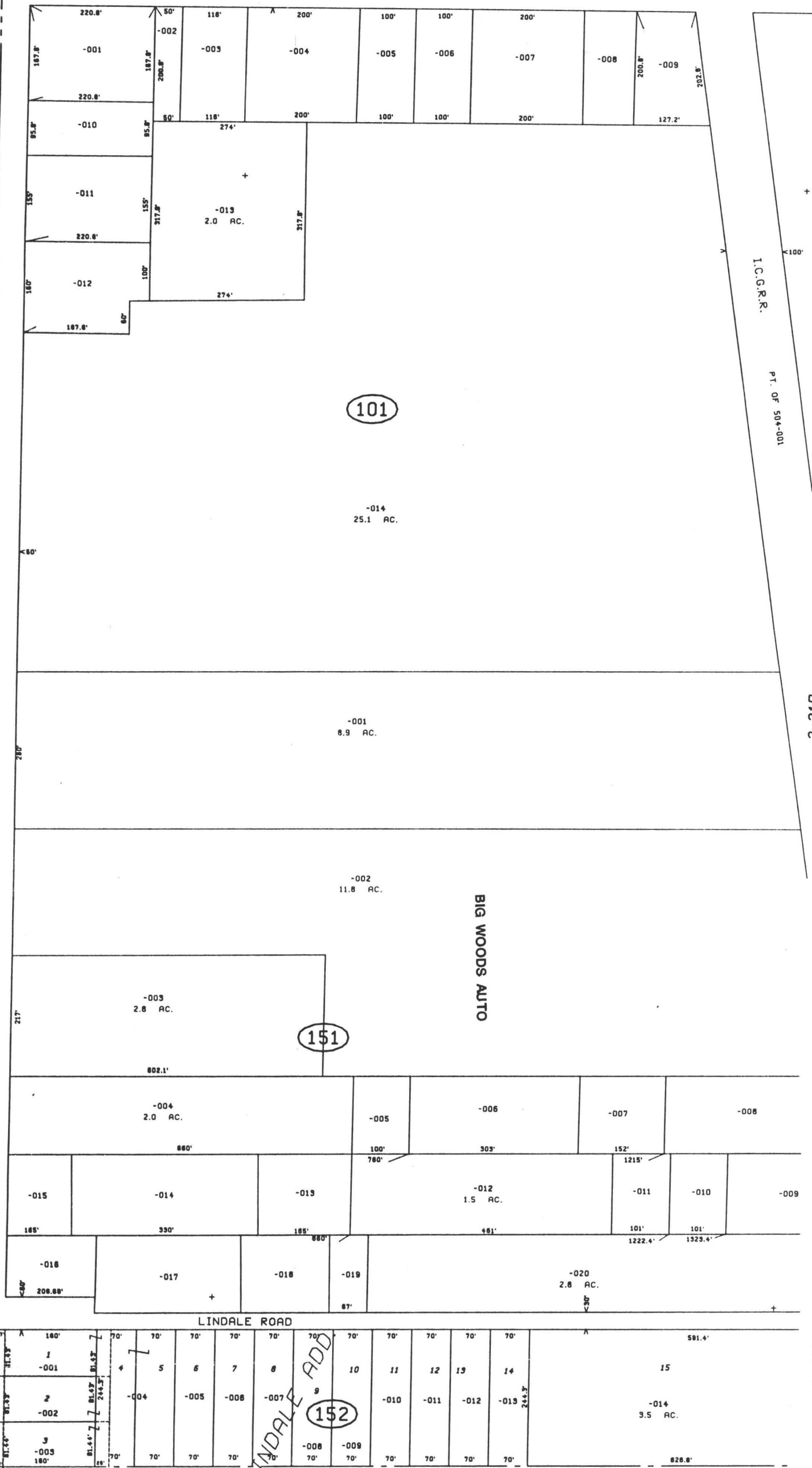
W 1/2, NW 1/4, SEC. 31, T90N, R13W BLACK HAWK COUNTY, IOWA

1-25

BIG WOODS ROAD

1422'

DIMENSIONS ARE TO SECTION LINE UNLESS OTHERWISE NOTED



2-31B

SCALE 1"=100'

N

THESE MAPS HAVE BEEN DEVELOPED FROM COUNTY PROPERTY RECORDS AND WITH THE USE OF AERIAL PHOTOGRAPHY, AND ARE INTENDED FOR PROPERTY TAX DETERMINATION PURPOSES ONLY. DIMENSIONS AND AREAS SHOWN ARE NOT BASED ON ACTUAL GROUND SURVEYS.

BRICE, PETRIUS & ASSOCIATES INC.

2-30

2-31A

W 1/2, NW 1/4, SEC. 31, T90N, R13W BLACK HAWK COUNTY, IOWA

APPENDIX C

VSI NOTIFICATION LETTER/SWMU REQUEST AND RESPONSE

BIG WOODS AUTO  
EPA ID# IAD981711948

TDD #F-07-9004-010  
PAN #FIA0263RA





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII  
726 MINNESOTA AVENUE  
KANSAS CITY, KANSAS 66101

MAY 04 1990

CERTIFIED MAIL

Return Receipt Requested

Article Number: P 056 317 562

Mr. Melvin Cunningham  
Big Woods Auto  
3305 Big Woods Road  
Cedar Falls, Iowa 50613

Re: Big Woods Auto  
Cedar Falls, Iowa  
EPA ID No. IAD981711948

Request for Information

Dear Mr. Cunningham:

As Patricia Frey of my staff discussed with you on May 2, 1990, arrangements are being made by the Environmental Protection Agency (EPA) to conduct a Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) Visual Site Inspection (VSI) at your facility in May. The Hazardous and Solid Waste Amendments of 1984 to RCRA require the completion of a RFA to determine if hazardous constituents have been released to any environmental media from Solid Waste Management Units (SWMUs), both present and historical, which have been operated at the facility, and if any such releases are identified, what additional investigation and/or remediation is necessary.

An integral part of a RFA is the VSI. The purpose of the VSI is to determine and/or verify the location of all SWMUs and other areas of concern. A VSI has tentatively been scheduled for the Big Woods Auto facility in Cedar Falls, Iowa on Tuesday, May 15, 1990. The VSI will be conducted by Ecology & Environment (E&E), who is the EPA's authorized representative. E&E may require your assistance in reviewing solid waste flow or previous waste management practices. This site visit is intended to provide us with a technical understanding of the present and past waste flows at your facility. Photographs of each SWMU will be taken to document existing conditions at the facility. No samples will be taken during the VSI.

RECEIVED

MAY 08 1990

E&E K.C.K.

*new  
business  
Liscarsen*

During our scheduled visit, you will need to be available to assist in scheduling and coordinating the RFA activities, including conducting a tour of the facility, and assisting with any questions. In addition, during the evaluation, access to the facility files will be required to allow for review and copying, as necessary, of any documents pertaining to the facility's waste management practices or processes. Copied materials will need to be reviewed by E&E both on-site and subsequently at our offices, in order to complete the evaluation process. Prior to visiting the site, E&E or EPA may notify you as to what documents may need to be reviewed, so that copies of these documents will be available on the day of our visit.

On the day of the VSI, EPA will be represented by Wes McCall, Deborah Fischer and Otavio Silva of E&E and Patricia Frey of my staff. Enclosed is a description of the above mentioned E&E staff members. Also enclosed is a schedule of the activities to be performed during the VSI.

In preparation for the VSI, EPA requests that you submit information regarding SWMU's located at the subject facility. This information is needed as part of the RFA.

Section 3007 of RCRA, 42 USC Section 6927, authorizes EPA to require that information be provided for the purpose of determining compliance with the federal hazardous waste regulations. The term "Hazardous Waste" is defined in Section 1004 of RCRA, 42 USC Section 6903 and Title 40 Code of Federal Regulations (CFR) § 261.3. Pursuant to the provisions of Section 3007 of RCRA, EPA hereby requests that you provide the following information and copies of the following documents, to the extent that such information is available. Note that for the purposes of the following requests, the following definitions apply.

A "solid waste management unit" (SWMU) is defined as any unit from which hazardous waste or hazardous constituents might migrate. This definition applies to active as well as inactive units containing either hazardous wastes or solid wastes, or both. Examples of SWMUs include: landfills, surface impoundments, waste piles, land treatment units, incinerators, injection wells, above and below ground tanks (including 90-day accumulation tanks), transfer stations, and waste recycling operations. In addition, the Agency has interpreted the term to apply to areas associated with production processes which have become contaminated as a result of routine and systematic releases of hazardous waste or hazardous constituents (a product may become a waste if it is discarded or abandoned).

"Hazardous constituents" include those constituents listed in Appendix VIII to 40 CFR Part 261.

"Hazardous waste" means those solid wastes identified as hazardous waste in 40 CFR Part 261.

"Facility" includes all contiguous property under the control of the owner or operator on November 8, 1984, on which units subject to permitting are located.

"Release" includes any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, but excluding releases otherwise permitted or authorized under the law (e.g., NPDES permitted discharges).

The terms "furnish," "describe," or "indicate" mean turning over to EPA either originals or duplicate copies of the requested information in the possession, custody, and/or control of the owner or operator of the facility. Where specific documents do not exist which are responsive to an information request but such information is known, you may respond to the question with a written response, without providing documents.

"Hazardous substance" means (a) any substance designated pursuant to section 311(b)(2)(A) of the Federal Water Pollution Control Act; (b) any element, compound, mixture, solution, or substance designated pursuant to Section 102 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); (c) any hazardous waste having the characteristics identified under or listed pursuant to Section 3001 of RCRA (but not including any waste the regulation of which under RCRA has been suspended by Act of Congress); (d) any toxic pollutant listed under Section 307(a) of the Federal Water Pollution Control Act; (e) any hazardous air pollutant listed under Section 112 of the Clean Air Act; and (f) any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to Section 7 of the Toxic Substances Control Act.

1. Provide a map showing the facility property boundaries and the location of all known SWMUs whether currently in operation or not. This map should be drawn to scale, or adequately dimensioned, and clearly indicate the location and size of all SWMUs. The scale of the map should also be identified. If there are no known SWMU's (e.g. surface impoundments, tanks, landfills, waste piles, etc.), so indicate in your response to EPA. There is no need to go on further with the response if this is the case.

a. For each SWMU identified, describe the type of unit (e.g., container, storage area, landfill, waste pile, etc.), and the dimensions of the unit.

b. For each SWMU identified, indicate the beginning and ending dates that the unit was in use.

c. For each SWMU identified, describe the quantity and type(s) of wastes managed in the unit.

d. For each SWMU identified, indicate the dates, quantity, and type(s) of any known release(s) of hazardous wastes or hazardous constituents from that SWMU.

e. Provide all information, data, and documentation concerning any releases occurring from a SWMU at your facility, including the results of any soil, air or water (ground or surface) testing that indicates presence of hazardous waste or hazardous constituents.

f. For each SWMU identified, describe any corrective action measures and any mitigating measures (e.g., replacement of water supplies) which have been completed or are currently underway to address any release(s).

2. On the map provided pursuant to item 1 number above, clearly indicate the location of all known units at your facility, other than SWMUs, whether currently in operation or not, which hold or have held hazardous substances and from which there have been releases of hazardous wastes or hazardous constituents.

a. For each unit identified, describe the type of unit (e.g., production area, underground storage tank) and the dimensions of the unit.

b. For each unit identified, indicate the beginning and ending dates that the unit was in use.

c. For each unit identified, describe the quantity and type(s) of hazardous substances managed in the unit.

d. For each unit identified, indicate the dates, quantity, and type(s) of any known release(s) of hazardous wastes or hazardous constituents.

e. Provide all information, data, and documentation concerning any releases occurring from a unit at your facility, including the results of any soil, air or water (ground or surface) testing that indicates presence of hazardous waste or hazardous constituents.

f. For each unit identified, describe any corrective action measures and any mitigating measures (e.g., replacement of water supplies) which have been completed or are currently underway to address any release(s).



Failure to provide the requested information within thirty (30) days of the date of receipt of this letter may subject you to an enforcement action under Section 3008 of RCRA, 42 USC Section 6928. However, as Ms. Frey discussed with you, we would appreciate receiving your response before May 15, 1990. Your response will be reviewed to determine if any further enforcement action is necessary. Such enforcement action may include the assessment of penalties of up to \$25,000 for each day of non-compliance.

Your facility may, if it desires, assert a business confidentiality claim covering part or all of the information submitted to, or reviewed by, EPA. Such a claim may be made by placing on (or attaching to) the information, at the time of its submittal to, or review by, EPA, a cover sheet, stamped or printed legend, or other suitable form of notice employing language such as "trade secret," "proprietary," or "company confidential." Allegedly confidential portions of otherwise nonconfidential documents should be clearly identified and may be submitted separately to facilitate identification and handling by EPA. If confidential treatment is sought only until a certain date or until the occurrence of a certain event, the request should so state.

Information submitted for which a claim of confidentiality is made will be disclosed by EPA only to the extent and by means authorized by the procedures specified in 40 CFR Part 2, Subpart B (1985), as amended by 50 Federal Register 51654, December 18, 1985. If no such claim is made when information is received by EPA, information may be made available to the public without further notice.

Please note that all information must be complete, accurate, and must include a certification by you. Your response shall be sent to the letterhead address, Attention: Patricia Frey, RCRA/IOWA. If you have any questions regarding the VSI or the request for SWMU information, please contact Ms. Frey at (913) 551-7058.

Sincerely yours,

*Lyndell J. Sanderson*  
for Michael J. Sanderson  
Chief, RCRA Branch  
Waste Management Division

cc: Pete Hamlin, IDNR  
Wes McCall, E&E  
Otavio Silva, E&E  
Ron Coffman, Coffman's Auto Body

Enclosures

RECEIVED

MAY 16 1990

IOWA SECTION

Big Woods Auto  
3305 Big Woods Road  
Box 981  
Cedar Falls, Ia. 50613  
May 14, 1990

Michael J. Sanderson  
Chief, RCRA Branch  
Waste Management Division

Response to Request For Information

Dear Mr. Sanderson:

The following are answers to your letter requesting information to help your agency conduct a Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) Visual Sight Inspection (VSI).

1. A map is provided and enclosed showing all requested information.
  - a. The only "Solid Waste Management Unit" (SWMU) existing is described as storage area, and has dimensions of 35' x 38'.
  - b. The storage area (SWMU) identified was initiated shortly after January of 1983 and was ended when 500 gallons of waste paint-related material was picked up by Larsen Oil Co. on 17 Feb., 1987, and moved on Minnesota Manifest Number 0039548. Big Woods temporary Provisional EPA I.D. Number was IAP000000128.
  - c. There were 500 gallons of waste paint-related material classified as F003 and F005.
  - d. No known release of waste material occurred.
  - e. Not applicable.
  - f. Not applicable.
2. This does not apply since only one storage area is in question, and no release has been identified.
  - a - f. Not applicable.

The occurrence of waste storage happened as a one-time thing for a temporary period until a proper disposal method could be determined. The waste was generated entirely by Coffman's Body Shop--not Big Woods Auto--and was never moved to any other part of the Big Woods property. The Big Woods Facility was never for hire as a storage area, and Coffman's material was the only one received.

Sincerely yours,

*Melvin S. Cunningham*

Mel Cunningham, Owner  
Big Woods Auto

APPENDIX D  
WELL LOGS AND WELL DATA

BIG WOODS AUTO  
EPA ID# IAD981711948

TDD #F-07-9004-010  
PAN #FIA0263RA

## STRATAGRAPHIC COLUMN : DISCUSSION

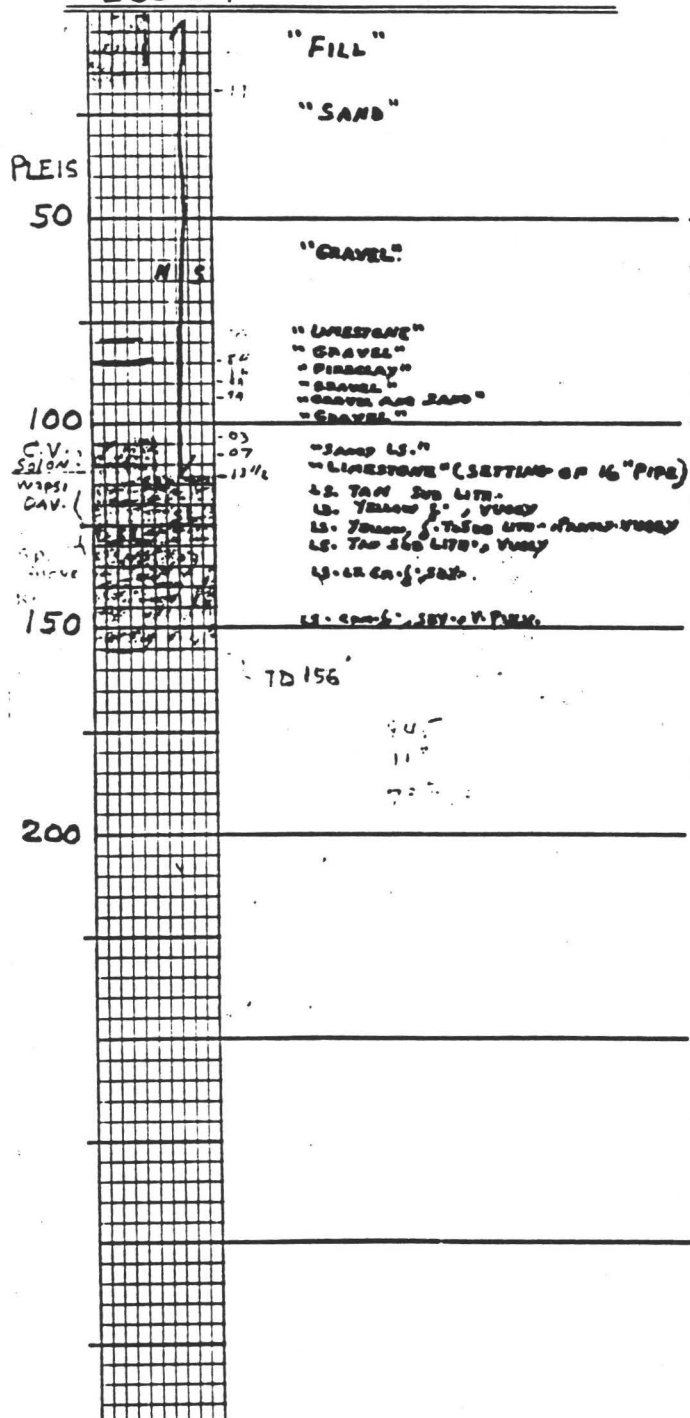
As indicated by area well logs (Appendix <sup>D</sup>E) the site is underlain to a depth of approximately 1,200 feet by Ordovician, Silurian, Devonian, and Quaternary-age deposits (figure 5-1). Ordovician rock units are about 1,000 feet thick and are penetrated by a former water supply well located in the SW 1/4, SE 1/4, SE 1/4, SE 1/4, of Section 23, T89N, R13W (Appendix E, Well E). These deposits are, in ascending order: the Oneota and Shakopee formations consisting of 343 feet of siliceous, cherty dolomite; the St. Peter formation consisting of 476 feet of well-rounded, friable quartzose sandstone; the Platteville formation, consisting of 100 feet of limestone with interbedded shale, the Decorah formation, composed of 225 feet of cherty limestone; and the Maquoketa formation, consisting of 230 feet of dolomitic shale.

The Silurian-aged sediments are 102 feet thick and also are penetrated by well E. the Silurian-aged rocks consist of, in ascending order: the Mosalem formation, consisting of 10 feet of cherty dolomite; the Blanding formation, consisting of 75 feet of cherty dolomite; and the Hopkinton formation, composed of 17 feet of silty dolomite.

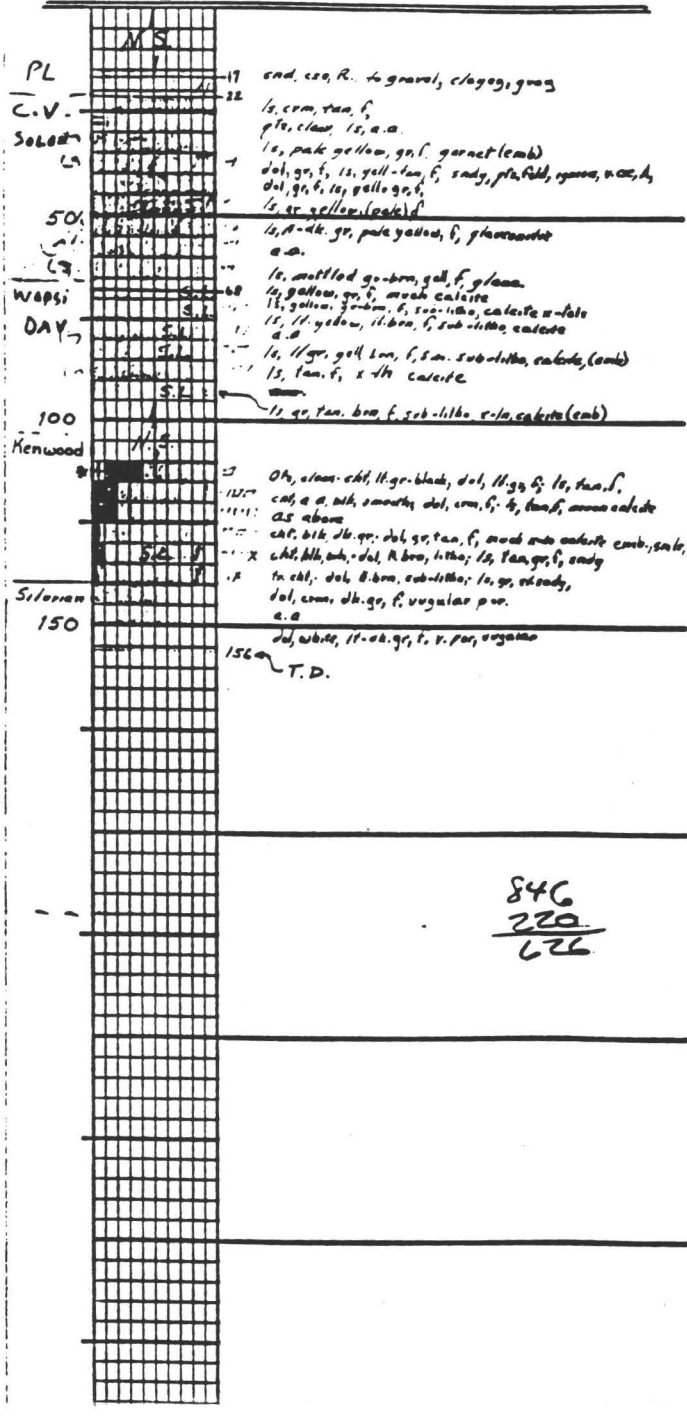
The Devonian-aged sediments present are about 125 feet thick and are composed of the Wapsipinicon and Cedar Valley formations. The Wapsipinicon formation is encountered in an abandoned well located in the SE 1/4, SW 1/4, SW 1/4, of Section 24, T89N, R13W (Appendix E, WELL B). This formation consists of 75 feet of arenaceous, chery limestone, and dolomite. The Cedar Valley formation is penetrated in an abandoned water supply well located in the SE 1/4, SW 1/4, NE 1/4, of Section 25 T89N, R13W (Appendix E, well D) and consists of 70 feet of fractured limestone. In this location the Cedar Valley formation, which regionally attains a thickness of 155 feet, has had its upper portion removed by erosional processes as evidenced by the Pliestocene sand and gravel which unconformably overly this facies.

The Quaternary deposits range from 1 to approximately 100 feet in thickness and include Pleistocene valley train and till deposits and Holocene alluvium. these deposits are penetrated by a well located in the SE 1/4, SW 1/4, NE 1/4, of Section 25, T89N, R13W (Appendix E, Well C). The deposits consist of, in ascending order: 8 feet of very coarse, well rounded, sand and gravel; 5 feet of arenaceous, calcareous, gray clay; and 22 feet of well rounded, oxidized, medium to coarse sand. The coarse sand and gravel facies is unconformably underlain by the Cedar Valley formation.

<b>STATE</b>	IOWA	<b>WATERLOO (BLACKHAWK)</b>															
<b>NW SW</b>		<b>JOHN DEERE TRACTOR WORKS</b>															
<b>SEC.</b>		<b>PUMPING PLANT</b>															
<b>TWP.</b>	RGE.	<b>BEGINNED COMMENCED COMPLETED</b>															
89N	13W	JUNE 1953															
		MILLARD W. LAYNE-WESTERN Co. CREECH <b>CASINO RECORD</b>															
<table border="1"> <tbody> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> </tbody> </table>																	16" PIPE SET AT 113'½'
		<b>LOGGED BY</b>															
APRIL 9, 1954		NORTHUP															
<b>REMARKS</b>																	
EL TD 158'		SWL 10'															
EC-5-6																	



STATE <div style="border: 1px solid black; padding: 2px; text-align: center;">IOWA</div> Mulberry & 5th 5 1/4 cor. SEC. 31. 34 SW <div style="border: 1px solid black; padding: 2px; text-align: center;">24</div> TWP.      RGE. 89N      13W	WATERLOO (BLACKHAWK) BLACKHAWK COUNTY COURTHOUSE HOGG + AMES INC. COMMENCED      COMPLETED FALL 1963																
<table border="1" style="width: 100%; height: 150px; border-collapse: collapse;"> <tr><td style="width: 25%; height: 30px;"></td><td style="width: 25%; height: 30px;"></td><td style="width: 25%; height: 30px;"></td><td style="width: 25%; height: 30px;"></td></tr> <tr><td style="height: 30px;"></td><td style="height: 30px;"></td><td style="height: 30px;"></td><td style="height: 30px;"></td></tr> <tr><td style="height: 30px;"></td><td style="height: 30px;"></td><td style="height: 30px;"></td><td style="height: 30px;"></td></tr> <tr><td style="height: 30px;"></td><td style="height: 30px;"></td><td style="height: 30px;"></td><td style="height: 30px;"></td></tr> </table>																	CASING RECORD    LOGGED BY 3/3/64      Norm Church REMARKS
EL =  T.D. = 156'	          																

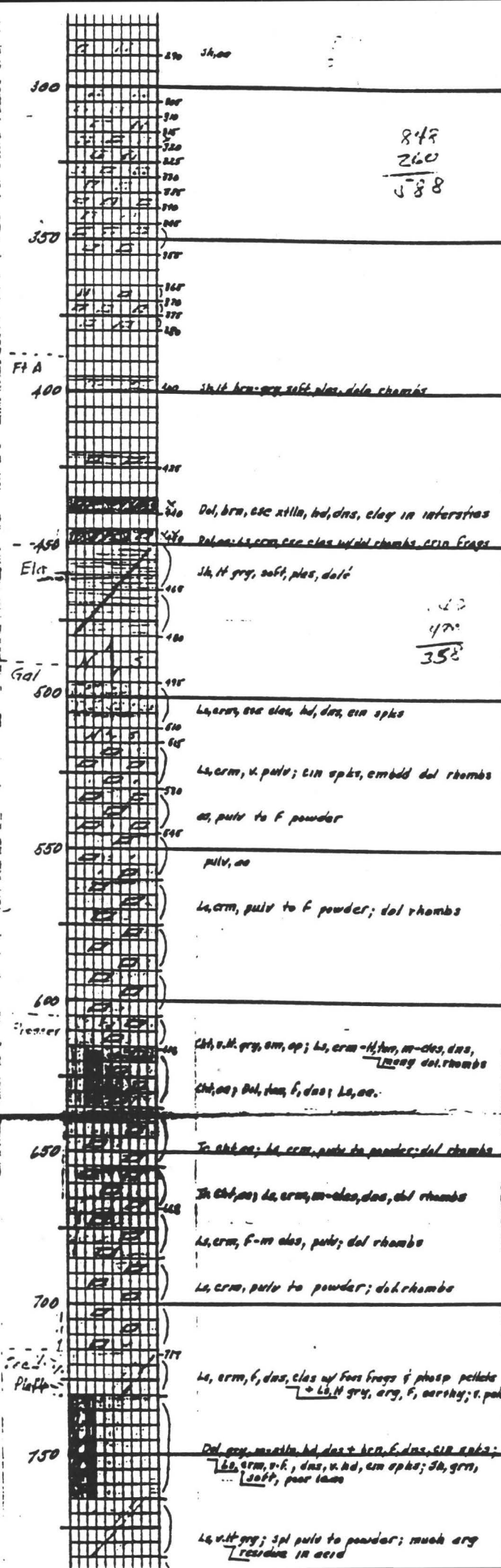






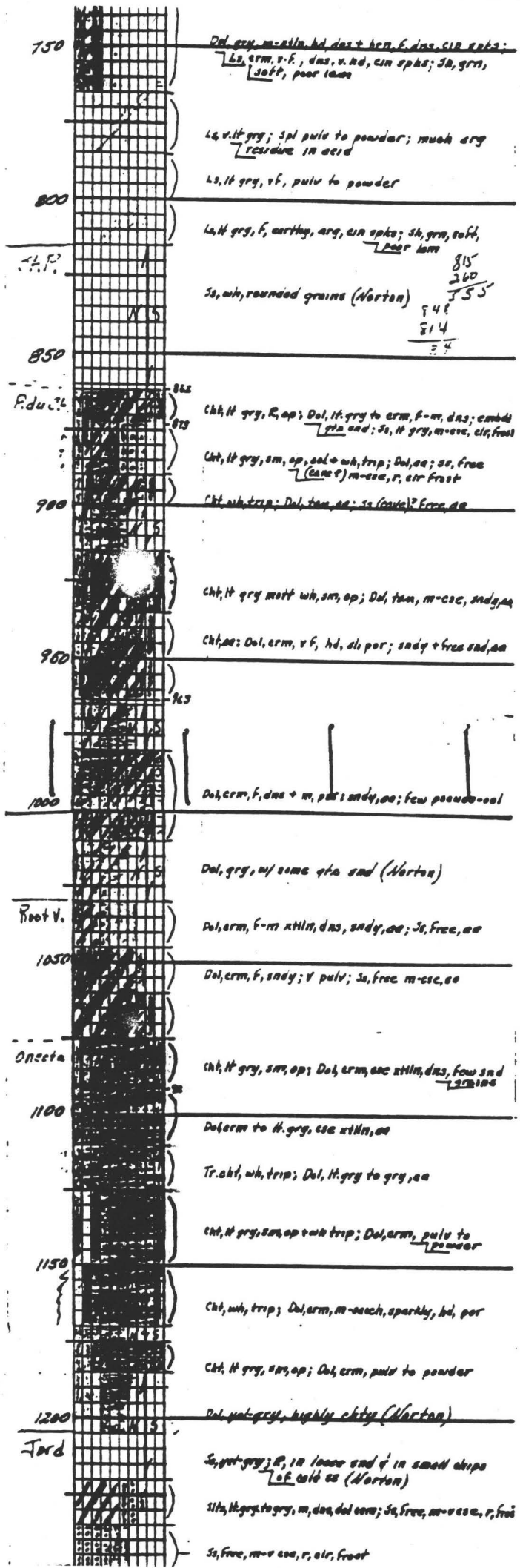


(E)



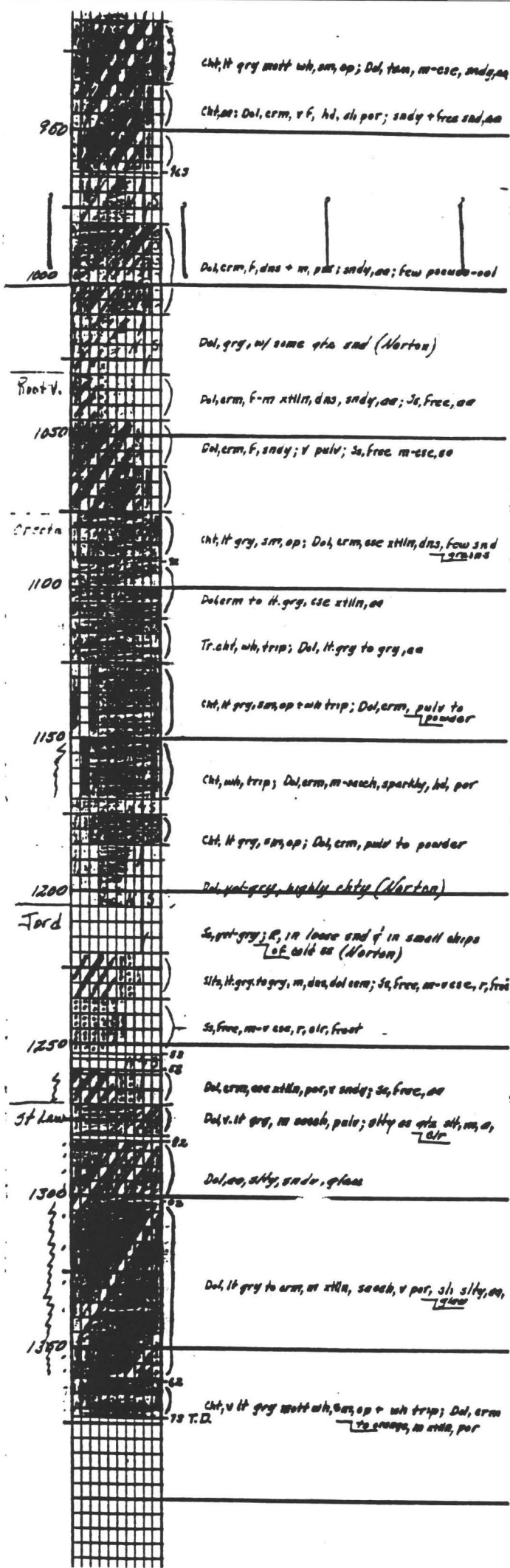


cont.  
(E)



cont.

(E)



Well # 1

Sd, m-c, A  
 Till, org. chert, gel. org.  
 Sd + Grav.  
 Till, gr. unsh.  
 Till + chert, gr.  
 Clay, org. brn, uncl.  
 Ls, yel, bf = brn + G, mat.  
 chert, red G-T wh, Ls, red brn-bf, f  
 Ls pass at 64  
 chert, wh-bf 3-6; Ls, yel, mat, w/calcite, v. brn +  
 Ls, yel brn +; calcite ph.  
 Ls, yel, bf-brn sl - v. f. f. f.  
 gr sl, arg.  
 Ls, yel w wh edges sl  
 Ls, yel brn cl

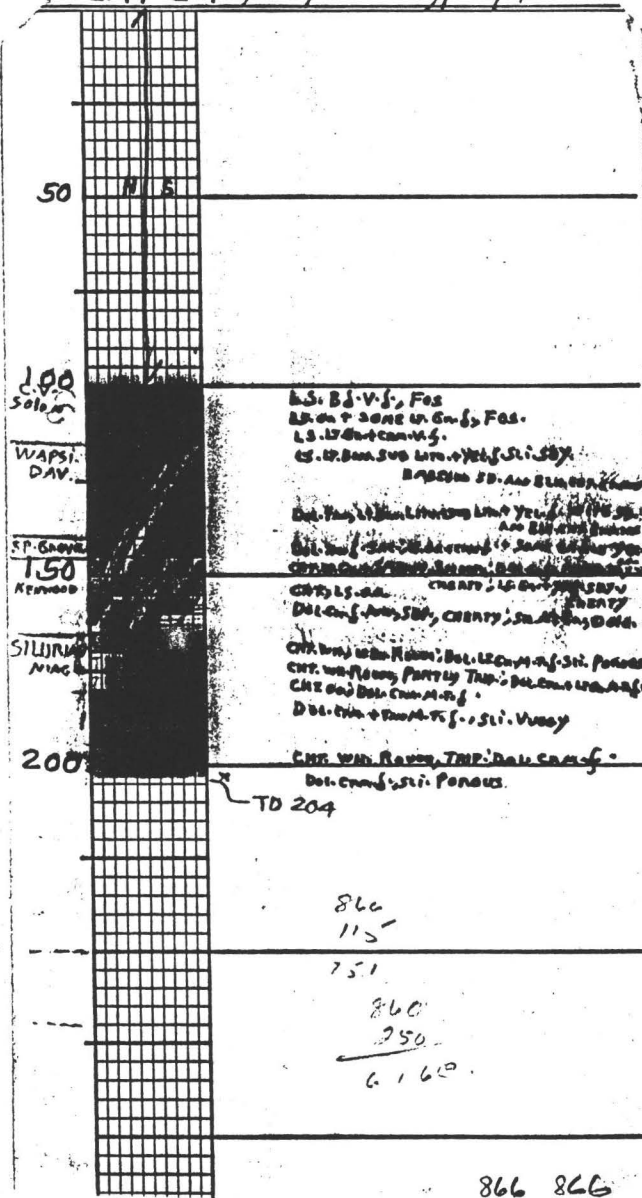
876  
 54  
 816

⑥

Well #2

FORM NO. 79—In stock and for sale by Ross-Martin Co., Tulsa. W-8641

STATE <b>IOWA</b>		<b>WATERLOO (BLACKHAWK)</b>													
NE SE		<b>WATERLOO CITY WIRE #16</b>													
SEC. <b>9</b>															
TWP. <b>89N</b>	RGE. <b>13W</b>	COMMENCED	COMPLETED												
		<b>MAY 7, 1957</b>													
<table border="1"> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> </table>														<b>THORPE WELL CO.-BOYD IRWIN</b>	
CASING RECORD															
LOGGED <b>FEB. 5, 1958</b>		BY <b>NORTHUP</b>													
REMARKS															
<b>EL 866</b>															
<b>TD 204'</b>		<b>SWL 15'</b>													
		<b>PL 34'</b>													
		<b>Yield 4220 GPM.</b>													
<b>EM 9-2</b>		<b>sp cap = 222 gpm/ft</b>													




Well #6

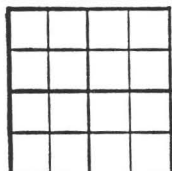
[illegible]



I

Well # 16

FORM NO. 79—In stock and for sale by  Martin Co., Tulsa W-18103

STATE		IOWA		WATERLOO (BLACKHAWK)	
NE NW NENE		CLYDE TERHUNE			
SEC.		29			
TWP.	RGE.	COMMENCED	COMPLETED		
90N	13W	SEPT. 1965			
		HOWARD WHITE			
		CASING RECORD			
		105' O.P.S." CSE.			
		LOGGED			
7 1/2 Laps, 1968		DEC. 3, 1970 BY NORTHUP			
EL 935'		REMARKS			
TD 120'					
		YIELD = 15 GPM.			

PL6-381

P  
L  
E  
I  
S.  
50

100  
CV.

SB. Yellow Crs. T.S. A-2  
Till. Yellow, OXIDIZED, UNLEACHED  
Till. sil. Mix. - Yellow, Brownish.  
Till. Gr., UNOXIDIZED, UNLEACHED

Gravelly A-2, SB. 22 in. Crs. T.S. A-2  
Till. Gr., V. SDY.  
Till. Gr., clayey - SCATTERED PEBBLES

Clay. W. Yellowish SDY.  
Gravelly A-2  
Diat. on fringes.  
Diat. Gravelly - SDY.  
Diat. LE af., ANG.

935  
105  
P30

⑤

Well # 19

FORM NO. 79—In stock and for sale by Ross-Martin Co., Tulsa. W-14496	
STATE	10WA
CEDAR FALLS (BLACKHAWK)	
NW SW SW	E. GRAY
SEC.	
25	
TWP.	COMMENCED
90N	APRIL 11-15, 1963
RGE.	COMPLETED
19W	
	HOWARD WHITE
	CASING RECORD
	115' OF 6" CSG.
	LOGGED
	SEPT. 29, 1965 BY
	NORTHUP
	REMARKS
EL 876'	
TD 128'	SWL 18' 6"
	PL 18' 6" @ 100 GPM.
JCP	
10765	
TL4-795	

P  
 L  
 E  
 1  
 S.  
 50  
 C.V.  
 100  
 SOLON  
 4-1-  
 Soil Dr. Brw., Silty, SDY.  
 Till Yellow, oxidized, w/iracoma, SDY.  
 Gravel v.f.a., SD. Yellow crst. f.f.  
 Gravel v.f.a., SD. 40% Yellow crst. A-a-r  
 Gravel v.f.a.; SD. Yel. crst. f.f. A-a-r  
 SD. Yellow crst. f.f. A-a-r  
 SD. Mostly Yellow v. crst. f.f. A-a-r  
 SD. Yellow f.f. A-a  
 Gravel f.f. v.f.a. A-a; SD. Yel. crst. v.f.a.  
 Dol. B.f.f. Sand, calc.  
 Ls. li. in f. - Blk. Fos. Spang, B&S  
 Ls. B.f.f. Fos.  
 Ls. li. in f.  
 40.00 Gr. + B.f.f.  
 TO 128'  
 876  
 90  
 786

MUNICIPALITY: Cedar Falls

0665 COUNTY: Black Hawk (7)

01.

WELL NUMBER: 4, W-8674 (Cedar Heights)

LOCATION: NW, SE, SW, SW, Sec. 17, T89 N., R. 13 W. Meda St. between Rainbow & Pleasant

This location is 3 quarters more resolution than strip log location ~ 75' from #3

ELEVATION: 935' ± 4' topo

TOPOGRAPHIC MAP: Cedar Falls 7 1/2'

TOTAL DEPTH: 218'?

DIAMETER:

TYPE: Drilled, rotary

CONTRACTOR: Sunberg Construction

DATE COMPLETED: 8-19-57

CASING SCHEDULE: 0' - 16 1/4' of 16"

S.W.L.: 92' (1957) P.L.: 107' (1957) PUMPING RATE: 2324 gpm (1957)

PUMP CAPACITY:

MAIN WATER:

UNIT: Rapid 344 RPID

GEOLOGY:

0' - 125' Pleistocene  
125' - 150' Devonian  
N/S 150' - 218' Devonian

REMARKS: well was capped after drilling; planned for future use, but not needed

Strip logs for wells #4 + #3 are poor - they may be reversed

MUNICIPAL AUTHORITY: Cedar Falls Utilities

319-266-1761 ext. 358 612 E. 12th St.  
Cedar Falls, IA 50613

Paul Mallinger, Water System Specialist

WATER USE: 4,000,000 avg gpd (2-24-81 - 2-4-86) max gpd. 7,000,000 ( - - )

POPULATION SERVED: 36,300 POPULATION EQUIVALENT (@ 100 gpcd): 40,000

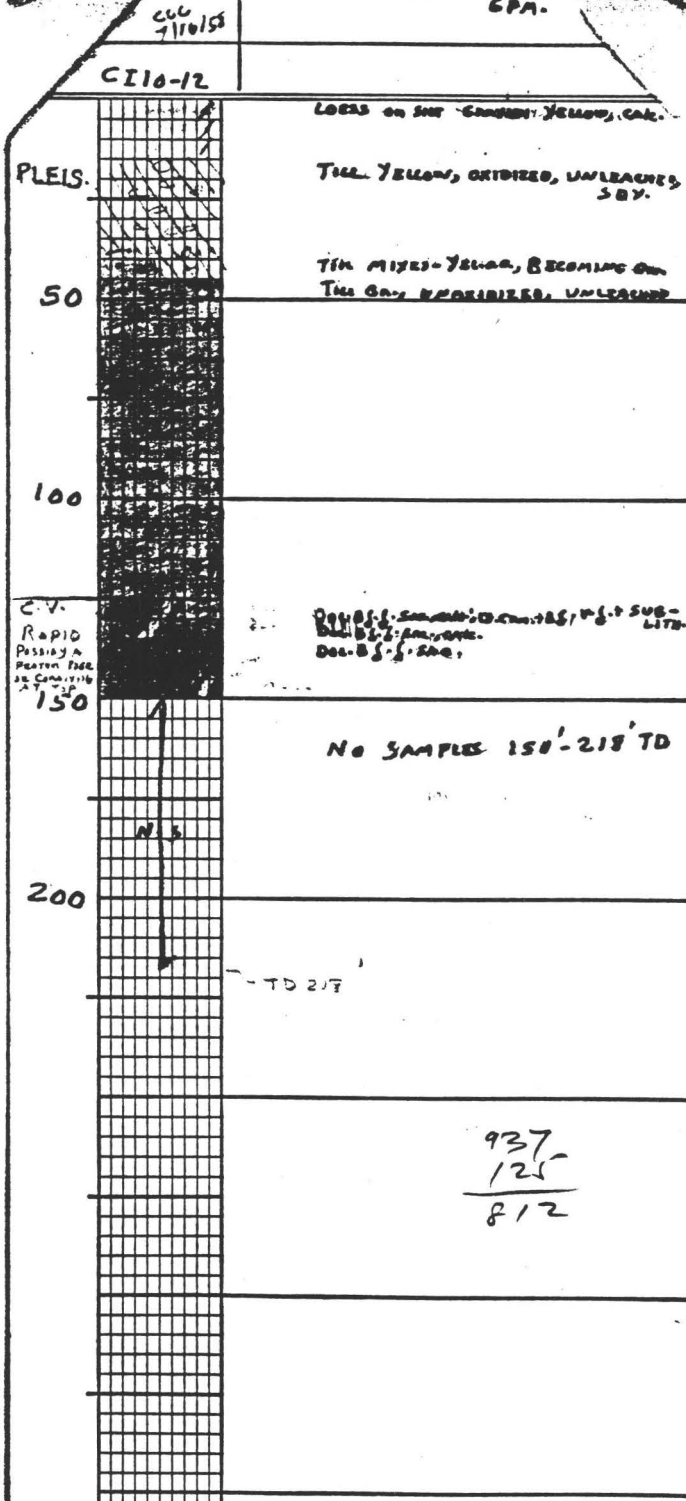
1986 Cedar Falls derives its water from wells #1, 2, 3, 5, 6, 7, 8, 9,

TREATMENT: Chlorination gas; #1, 2, 5, 7, 8, 9, 10 - V



STATE		IOWA		CEDAR FALLS (BLACKHAWK)													
SE SW SW		CEDAR FALLS CITY WEL (1957)															
SEC.		(CEDAR HILLS)															
TWP.		RGE.		COMMENCED	COMPLETED												
89N		13W		AUG. 2-19, 1957													
<table border="1"> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> </table>														SUNBERG WELL CO.			
CASING RECORD																	
12" CASING 0-169'																	
CEMENTED—Where (?)																	
LOGGED		JUNE 11, 1958 BY NORTHUP															
REMARKS		ROTARY HOLE															
EL 937'		SWL 92'															
TD 218'		PL 107' @ 2324															
		CPA.															

Log  
K



PUR AN X BY THE WELL TO DISPLAY, OR ENTER AN X AND THE NEW WELL NAME TO ADD

GROUNDWATER SOURCE (MWSI)

PWS: CEDAR FALLS  
NAME: 1  
DEL:  
AVAILABILITY: PRIMARY  
QUARTERS: SE SW SE SE  
LATITUDE:  
ELEVATION: 865 FEET  
CONSTRUCTED: 8 27 1949  
RECONSTRUCTED:  
DEPTH: 175.00 FEET  
DIAMETER: 36 - 12 INCHES  
PUMP TYPE: TURBINE  
THIS WELL WAS LAST UPDATED 10 26 1987 BY P VANDORPE  
PF1=MAIN MENU PF2=PUBLIC SUPPLY PF3=COMMENTS PF4=SUMMARY GEOLOGY PF5=CASING  
PF6=AQUIFERS PF7=PRIOR WELL PF8=NEXT WELL PF9=CAPACITY PF10=RAW WATER QUAL.  
PF11=GEOLOGY (GEO) PF12=GWSI PF24=HELP CLEAR=EXIT

GROUNDWATER COMMENTS (MWSI)

PWS: CEDAR FALLS  
NAME: 1  
PERSON: DATE: COMMENT:  
P VANDORPE 10 26 1987 HOLE: 0'-151' OF 23"; 151'-175' OF 12"  
P VANDORPE 10 26 1987 \*\*DRILLER'S LOG: 0'-13' FILL; 13'-16'  
P VANDORPE 10 26 1987 CLAY; 16'-39' SAND; 39'-175' LIMESTONE\*\*  
P VANDORPE 10 26 1987 DEPTH ALSO REPORTED 200', 120', 140'  
P VANDORPE 10 26 1987 DATE OFTEN REPORTED 1952

PF1=MAIN MENU PF2=WELL PF4=GEOLOGY PF5=CASING PF6=AQUIFERS  
PF9=CAPACITY PF7=SCROLL UP PF8=SCROLL DOWN CLEAR=EXIT  
BOTTOM OF COMMENTS LIST

CASING SCHEDULE (MWSI)

PWS: CEDAR FALLS  
NAME: 1  
TOP (FT) 2.00  
BOTTOM (FT) 46.00  
COUNTY: BLACK HAWK  
USGS ID: 423142092262001  
DIAMETER (INS) 24.0

PF1=MAIN MENU PF2=WELL PF3=COMMENTS PF4=GEOLOGY  
PF6=AQUIFERS PF9=CAPACITY TESTS CLEAR=EXIT

CAPACITY TESTS (MWSI)

PWS: CEDAR FALLS  
NAME: 1  
COUNTY: BLACK HAWK

PF4=AQUIFERS

PF9=CAPACITY TESTS

CLEAR=EXIT

## CAPACITY TESTS (MWSI)

PWS: CEDAR FALLS

SITE ID: 0709084-01

COUNTY: BLACK HAWK

NAME: 1

W NO: 04216

USGS ID: 423142092262001

DATE

STATIC LEVEL

PUMPING LEVEL

RATE

DURATION

(FEET)

(FEET)

(GPM)

(HOURS)

1949

16.50

35.50

3,000.00

PF1=MAIN MENU

PF2=WELL

PF3=COMMENTS

PF4=GEOLOGY

PF5=CASING

PF6=AQUIFERS

CLEAR=EXIT

## SUMMARY GEOLOGY (MWSI)

PWS: CEDAR FALLS

SITE ID: 0709084-01

COUNTY: BLACK HAWK

NAME: 1

W NO: 04216

USGS ID: 423142092262001

TOP (FEET)

BOTTOM (FEET)

GEOLOGIC UNIT

0.00

40.00

N/S

NO SAMPLE

40.00

175.00

340DVNN

DEVONIAN SYSTEM

PF1=MAIN MENU

PF2=WELL

PF3=COMMENTS

PF5=CASING

PF6=AQUIFERS

PF7=SCROLL UP

PF8=SCROLL DOWN

PF9=CAPACITY

PF24=HELP

CLEAR=EXIT

## BOTTOM OF GEOLOGIC UNIT LIST

M200M168

AQUIFERS (MWSI)

PWS: CEDAR FALLS

SITE ID: 0709084-01

COUNTY: BLACK HAWK

NAME: 1

W NO: 04216

USGS ID: 423142092262001

AQUIFERS

AQUIFERS (CONTINUED)

344RPID

RAPID MEMBER

344SOLN

SOLON MEMBER

344WPPC

WAPSIPINICON FORMATION

344SPGV

SPRING GROVE MEMBER

*Cedar Valley Fm.*

PF1=MAIN MENU

PF2=WELL

PF3=COMMENTS

PF4=GEOLOGY

PF5=CASING

PF9=CAPACITY TESTS

PF24=HELP

CLEAR=EXIT

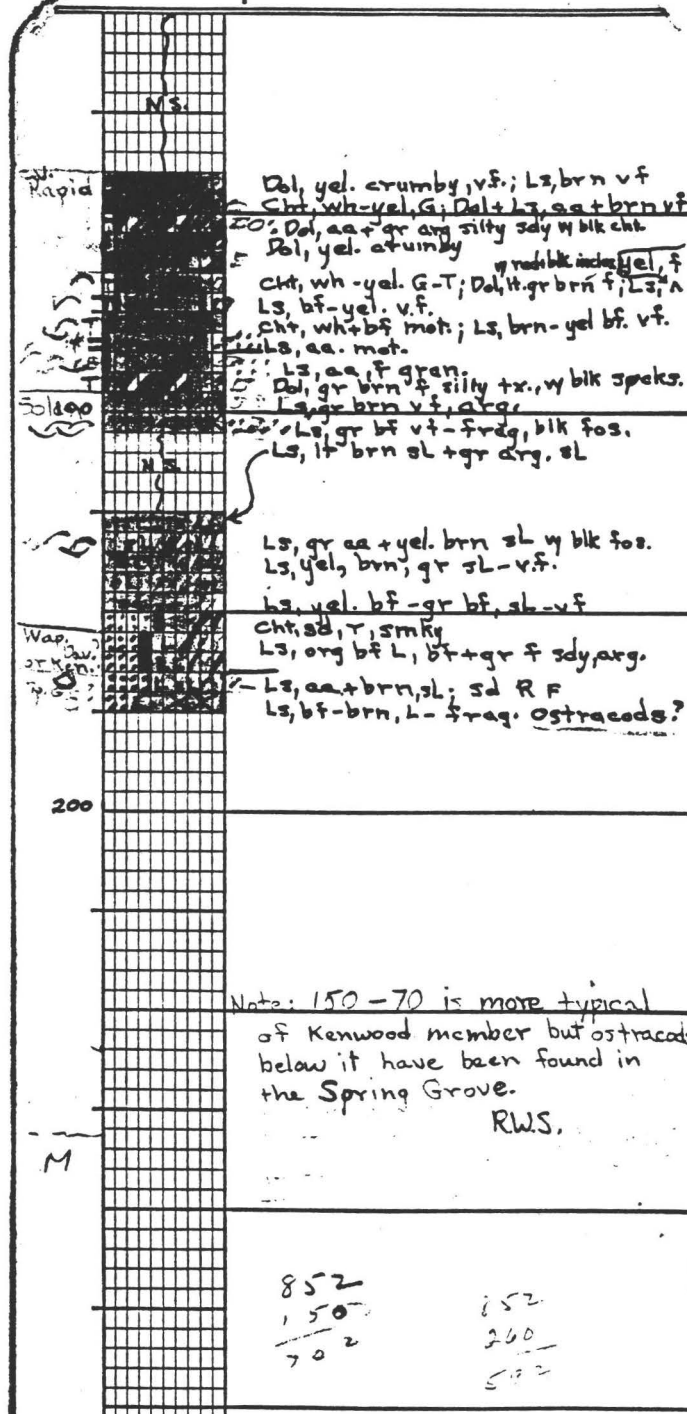
## GROUNDWATER SOURCE (MWSI)

PWS: CEDAR FALLS

SITE ID: 0709084-01

COUNTY: BLACK HAWK

STATE		Iowa		Cadaver Falls (Blackhawk)										
SW-SE-SE		SEC. 12		Power Plant										
TWP.	RGE.	COMMENCED	COMPLETED											
R9N	14W		1949											
<table border="1"> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> </table>											Thorp Well Co.			
CASING RECORD														
24" well														
LOGGED		BY												
October 10, 1950		RWS												
REMARKS														
#P 52														
T.D. 175		3000 gpm												



STATE <u>Iowa</u>		<u>Cedar Falls (Blackhawk)</u>	
<u>12th + Irving</u> SW 1/4, SE 1/4		<u>Cedar Falls Power Plant</u>	
SEC. <u>12</u> ↑		<u>Location questionable</u>	
TWP. <u>89</u>	RGE. <u>14</u>	COMMENCED	COMPLETED <u>1949</u>
		<u>Thorp Well Co.</u>	
		CASING RECORD	
		LOGGED <u>7-19-50</u>	
		BY <u>G. Huntington</u>	
EI. <u>857</u> KAR		REMARKS	
<u>TD 175</u>			
<u>(O.T.)</u>			
<u>CHI-9</u>			

Log  
(2)

DIST.	M. S.		Sand + Gravel, Much Clay hetero.
C.V.	Dolo. Crm - DFF. vry f. xdn dense		L.S. DFF vry f. yln dense L.S. a. a. + Dm. sub ltm Sand M-F, a. R, clear wavy + frosted
100	Dolo. Bm - Dm Gr. Mat. fine blk. spots vry f.		L.S. Dm Gr. sub ltm dense L.S. a. a. sub with wavy Mat.
J.A. 11	L.S. Dm + Dm Gr. sub with dense		Sand M. R. Fm. blk. sub. chert. pebbles r
	L.S. a. a. - Gr. sub ltm dense		

→ T. D. 175'

GROUNDWATER SOURCE (MWSI)

PWS: CEDAR FALLS      SITE ID: 0709084-02      COUNTY: BLACK HAWK  
NAME: 2      W NO: 04019      USGS ID:  
DEL:  
AVAILABILITY: PRIMARY      STATUS: ACTIVE  
QUARTERS: SW SE SE SE      SECTION: 12      TIER: 89 N      RANGE: 14 W  
LATITUDE:      LONGITUDE:      BASIN: 07080205  
ELEVATION: 865 FEET      MAP: CEDAR FALLS 7.5  
CONSTRUCTED: 9-30-1949      CONTRACTOR: THORPE WELL  
RECONSTRUCTED:  
DEPTH: 125.00 FEET      MAIN WATER: - FEET  
DIAMETER: 32 - 15 INCHES      DRILLING METHOD: UNSPEC. DRILLED  
PUMP TYPE: TURBINE      CAPACITY: 2,400 GPM      RATE: 2,400 GPM  
THIS WELL WAS LAST UPDATED 10-26-1987 BY P VANDORPE

PF1=MAIN MENU PF2=PUBLIC SUPPLY PF3=COMMENTS PF4=SUMMARY GEOLOGY PF5=CASING  
PF6=AQUIFERS PF7=PRIOR WELL PF8=NEXT WELL PF9=CAPACITY PF10=RAW WATER QUAL.  
PF11=GEOLOGY (GEO) PF12=GWSI PF24=HELP CLEAR=EXIT

GROUNDWATER COMMENTS (MWSI)

PWS: CEDAR FALLS      SITE ID: 0709084 2      COUNTY: BLACK HAWK  
NAME: 2      W NO: 04019      USGS ID:  
PERSON:      DATE:      COMMENT:  
P VANDORPE      10-26-1987      \*\*DRILLER'S LOG: 0'-1' FILL; 1'-4' BLACK  
P VANDORPE      10-26-1987      DIRT; 4'-8' YELLOW CLAY; 8'-35' SAND;  
P VANDORPE      10-26-1987      35'-125' LIMESTONE\*\*  
P VANDORPE      10-26-1987      DEPTH ALSO REPORTED 200', 105', 150'  
P VANDORPE      10-26-1987      DATE ALSO REPORTED 1954  
P VANDORPE      10-26-1987      STRIP LOG ALSO REPORTS DATE AS 9-50

PF1=MAIN MENU      PF2=WELL      PF4=GEOLOGY      PF5=CASING      PF6=AQUIFERS  
PF9=CAPACITY      PF7=SCROLL UP      PF8=SCROLL DOWN      CLEAR=EXIT

BOTTOM OF COMMENTS LIST

CASING SCHEDULE (MWSI)

PWS: CEDAR FALLS	SITE ID: 0709084-02	COUNTY: BLACK HAWK
NAME: 2	W NO: 04019	USGS ID:
TOP (FT)	BOTTOM (FT)	DIAMETER (INS)
1.00	39.00	16.0

PF1=MAIN MENU      PF2=WELL      PF3=COMMENTS      PF4=GEOLOGY  
PF6=AQUIFERS      PF9=CAPACITY TESTS      CLEAR=EXIT

CAPACITY TESTS (MWSI)

PWS: CEDAR FALLS      SITE ID: 0709084-02      COUNTY: BLACK HAWK

PF6=AQUIFERS

PF7=CAPACITY TESTS

CLEAR=EXIT

## CAPACITY TESTS (MWSI)

PWS: CEDAR FALLS

SITE ID: 0709084-02

COUNTY: BLACK HAWK

NAME: 2

W NO: 04019

USGS ID:

DATE

STATIC LEVEL

PUMPING LEVEL

RATE

DURATION

(FEET)

(FEET)

(GPM)

(HOURS)

1949

15.50

39.00

2,100.00

PF1=MAIN MENU

PF2=WELL

PF3=COMMENTS

PF4=GEOLOGY

PF5=CASING

PF6=AQUIFERS

CLEAR=EXIT

## SUMMARY GEOLOGY (MWSI)

PWS: CEDAR FALLS

SITE ID: 0709084-02

COUNTY: BLACK HAWK

NAME: 2

W NO: 04019

USGS ID:

TOP (FEET)

BOTTOM (FEET)

GEOLOGIC UNIT

0.00

35.00

N/S

NO SAMPLE

35.00

125.00

340DVNN

DEVONIAN SYSTEM

PF1=MAIN MENU

PF2=WELL

PF3=COMMENTS

PF5=CASING

PF6=AQUIFERS

PF7=SCROLL UP

PF8=SCROLL DOWN

PF9=CAPACITY

PF24=HELP

CLEAR=EXIT

## BOTTOM OF GEOLOGIC UNIT LIST

M200M168

AQUIFERS (MWSI)

PWS: CEDAR FALLS

SITE ID: 0709084-02

COUNTY: BLACK HAWK

NAME: 2

W NO: 04019

USGS ID:

AQUIFERS

AQUIFERS (CONTINUED)

344CDVL CEDAR VALLEY LIMESTONE

PF1=MAIN MENU

PF2=WELL

PF3=COMMENTS

PF4=GEOLOGY

PF5=CASING

PF9=CAPACITY TESTS

PF24=HELP

CLEAR=EXIT

## GROUNDWATER SOURCE (MWSI)

PWS: CEDAR FALLS

SITE ID: 0709084-03

COUNTY: BLACK HAWK







PF5=CASING

PF9=CAPACITY TESTS

PF24=HELP

CLEAR=EXIT

## GROUNDWATER SOURCE (MWSI)

PWS: CEDAR FALLS

SITE ID: 0709084-03

COUNTY: BLACK HAWK

NAME: 3

W NO: 09401

USGS ID:

DEL:

AVAILABILITY: PRIMARY

STATUS: ACTIVE

QUARTERS: NW SE SW SW SECTION: 17 TIER: 89 N RANGE: 13 W

LATITUDE: LONGITUDE: BASIN: 07080205

ELEVATION: 934 FEET MAP: CEDAR FALLS 7.5

CONSTRUCTED: 1957 CONTRACTOR: SUNBERG CON.

RECONSTRUCTED:

DEPTH: 183.00 FEET MAIN WATER: FEET

DIAMETER: 16 - 16 INCHES DRILLING METHOD: UNSPEC. DRILLED

PUMP TYPE: TURBINE CAPACITY: 2,133 GPM RATE: 2,133 GPM

THIS WELL WAS LAST UPDATED 10 26 1987 BY P VANDORPE

PF1=MAIN MENU PF2=PUBLIC SUPPLY PF3=COMMENTS PF4=SUMMARY GEOLOGY PF5=CASING

PF6=AQUIFERS PF7=PRIOR WELL PF8=NEXT WELL PF9=CAPACITY PF10=RAW WATER QUAL.

PF11=GEOLOGY (GEO) PF12=GWSI PF24=HELP CLEAR=EXIT

## GROUNDWATER COMMENTS (MWSI)

PWS: CEDAR FALLS

SITE ID: 0709084 3

COUNTY: BLACK HAWK

NAME: 3

W NO: 09401

USGS ID:

PERSON:

DATE:

COMMENT:

P VANDORPE 10 26 1987

\*\*STRIP LOGS FOR WELLS #3 &amp; 4 ARE POOR -

P VANDORPE 10 26 1987

THEY MAY BE REVERSED\*\*

P VANDORPE 10 26 1987

DEPTH ALSO REPORTED 186', 218'

P VANDORPE 10 26 1987

DATE ALSO REPORTED 1959

PF1=MAIN MENU

PF2=WELL

PF4=GEOLOGY

PF5=CASING

PF6=AQUIFERS

PF9=CAPACITY

PF7=SCROLL UP PF8=SCROLL DOWN

CLEAR=EXIT

## BOTTOM OF COMMENTS LIST

## CASING SCHEDULE (MWSI)

PWS: CEDAR FALLS

SITE ID: 0709084-03

COUNTY: BLACK HAWK

NAME: 3

W NO: 09401

USGS ID:

TOP (FT)

BOTTOM (FT)

DIAMETER (INS)

.00

PF1=MAIN MENU

PF2=WELL

PF3=COMMENTS

PF4=GEOLOGY

PF6=AQUIFERS

PF9=CAPACITY TESTS

CLEAR=EXIT

NO CASING: ENTER INFORMATION TO ADD OR SELECT NEXT FUNCTION

CAPACITY TESTS (MWSI)

NO CASING: ENTER INFORMATION TO ADD OR SELECT NEXT FUNCTION

PWS: CEDAR FALLS

CAPACITY TESTS (MWSI)

SITE ID: 0709084-03

COUNTY: BLACK HAWK

NAME: 3

W NO: 09401

USGS ID:

DATE

STATIC LEVEL  
(FEET)

PUMPING LEVEL  
(FEET)

RATE  
(GPM)

DURATION  
(HOURS)

PF1=MAIN MENU

PF2=WELL

PF3=COMMENTS

PF4=GEOLOGY

PF5=CASING

PF6=AQUIFERS

CLEAR=EXIT

NO CAPACITY TESTS: ENTER DATA TO ADD OR SELECT NEXT FUNCTION

SUMMARY GEOLOGY (MWSI)

PWS: CEDAR FALLS

SITE ID: 0709084-03

COUNTY: BLACK HAWK

NAME: 3

W NO: 09401

USGS ID:

TOP (FEET)

BOTTOM (FEET)

GEOLOGIC UNIT

0.00

40.00

112PLSC

FLEISTOCENE SERIES

40.00

55.00

340DVNN

DEVONIAN SYSTEM

55.00

183.00

N/S

NO SAMPLE

PF1=MAIN MENU

PF2=WELL

PF3=COMMENTS

PF5=CASING

PF6=AQUIFERS

PF7=SCROLL UP

PF8=SCROLL DOWN

PF9=CAPACITY

PF24=HELP

CLEAR=EXIT

BOTTOM OF GEOLOGIC UNIT LIST

M200M168

AQUIFERS (MWSI)

PWS: CEDAR FALLS

SITE ID: 0709084-03

COUNTY: BLACK HAWK

NAME: 3

W NO: 09401

USGS ID:

AQUIFERS

AQUIFERS (CONTINUED)

344CDVL

CEDAR VALLEY LIMESTONE

*part of Silurian-Devonian Sys.*

PF1=MAIN MENU

PF2=WELL

PF3=COMMENTS

PF4=GEOLOGY

PF5=CASING

PF9=CAPACITY TESTS

PF24=HELP

CLEAR=EXIT

STATE <b>IOWA</b>		<b>CEDAR FALLS (BLACKHAWK)</b>																
2608 > Neoka SWSW?		<b>CITY OF CEDAR FALLS #3</b>																
SEC. <b>13</b>		<b>(1957)</b>																
TWP. <b>89N</b>	RGE. <b>14W</b>	COMMENCED <b>1957</b>	COMPLETED															
<table border="1"> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td></tr> </table>																	<b>SUNBERG WELL Co.</b>	
CASING RECORD																		
		LOGGED <b>AUG. 5, 1957</b>	BY <b>NORTHUP</b>															
<b>EL 934</b>		REMARKS <b>SAMPLES GO TO 55' ONLY.</b>																
<b>TD ?</b>		<b>MANY SACKS APPARENTLY BELOW</b>																
<b>MB</b>		<b>55' HAD NO FOOTAGE</b>																
<b>8/2/59</b>		<b>ON THEM.</b>																

**NA6-19**

PLEIS.	1	-13	<b>GRAVEL AND SD.</b> Gravel 1-2 - water from P; SD. L280 - CNG Gravel 1-2 - SD. 1500, yellow cng. A-1 Gravel 1-2 - SD. 1500 - CLAYEY L2-21
	2		
CV.	3		
	4		
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Log  
N

## GROUNDWATER SOURCE (MWSI)

PWS: CEDAR FALLS

SITE ID: 0709084-08

COUNTY: BLACK HAWK

NAME: 9

W NO:

USGS ID:

DEL:

AVAILABILITY: PRIMARY

STATUS: ACTIVE

QUARTERS: SE NW NE SE SECTION: 35 TIER: 90 N RANGE: 14 W

LATITUDE: LONGITUDE: BASIN: 07080205

ELEVATION: 877 FEET MAP: CEDAR FALLS 7.5

CONSTRUCTED: 1975 CONTRACTOR: LAYNE WESTERN

RECONSTRUCTED:

DEPTH: 275.00 FEET MAIN WATER: - FEET

DIAMETER: 19 - 12 INCHES DRILLING METHOD: UNSPEC. DRILLED

PUMP TYPE: TURBINE CAPACITY: 2,200 GPM RATE: 2,200 GPM

THIS WELL WAS LAST UPDATED 10 26 1987 BY P VANDORPE

PF1=MAIN MENU PF2=PUBLIC SUPPLY PF3=COMMENTS PF4=SUMMARY GEOLOGY PF5=CASING

PF6=AQUIFERS PF7=PRIOR WELL PF8=NEXT WELL PF9=CAPACITY PF10=RAW WATER QUAL.

PF11=GEOLOGY (GEO) PF12=GWSI PF24=HELP CLEAR=EXIT

## GROUNDWATER COMMENTS

(MWSI)

PWS: CEDAR FALLS

SITE ID: 0709084 8

COUNTY: BLACK HAWK

NAME: 9

W NO:

USGS ID:

PERSON:

DATE:

COMMENT:

P VANDORPE 10 26 1987 \*\*HOLE: 0'-95' OF 19"; 95'-168' OF 15";

P VANDORPE 10 26 1987 168'-275' OF 12" \*\*

P VANDORPE 10 26 1987 \*\*CASING: 20" GROUTED; TOP OF 16" &amp; 12"

P VANDORPE 10 26 1987 UNKNOWN; 12" PERFORATED \*\*

P VANDORPE 10 26 1987 PUMP SET @ 157'

PF1=MAIN MENU

PF2=WELL

PF4=GEOLOGY

PF5=CASING

PF6=AQUIFERS

PF9=CAPACITY

PF7=SCROLL UP PF8=SCROLL DOWN

CLEAR=EXIT

BOTTOM OF COMMENTS LIST

## CASING SCHEDULE (MWSI)

PWS: CEDAR FALLS

SITE ID: 0709084-08

COUNTY: BLACK HAWK

NAME: 9

W NO:

USGS ID:

TOP (FT)

BOTTOM (FT)

DIAMETER (INS)

.00

95.00

20.0

168.00

16.0

223.00

12.0

PF1=MAIN MENU

PF2=WELL

PF3=COMMENTS

PF4=GEOLOGY

PF6=AQUIFERS

PF9=CAPACITY TESTS

CLEAR=EXIT

## CAPACITY TESTS (MWSI)

PWS: CEDAR FALLS

SITE ID: 0709084-08

COUNTY: BLACK HAWK

NAME: 9

W NO:

USGS ID:

PF6=AQUIFERS

PF9=CAPACITY TESTS

CLEAR=EXIT

PWS: CEDAR FALLS

CAPACITY TESTS (MWSI)

SITE ID: 0709084-08

COUNTY: BLACK HAWK

NAME: 9

W NO:

USGS ID:

DATE

STATIC LEVEL

PUMPING LEVEL

RATE

DURATION

(FEET)

(FEET)

(GPM)

(HOURS)

1975

30.00

37.00

2,200.00

.25

PF1=MAIN MENU

PF2=WELL

PF3=COMMENTS

PF4=GEOLOGY

PF5=CASING

PF6=AQUIFERS

CLEAR=EXIT

SUMMARY GEOLOGY (MWSI)

PWS: CEDAR FALLS

SITE ID: 0709084-08

COUNTY: BLACK HAWK

NAME: 9

W NO:

USGS ID:

TOP (FEET)

BOTTOM (FEET)

GEOLOGIC UNIT

0.00

PF1=MAIN MENU

PF2=WELL

PF3=COMMENTS

PF5=CASING

PF6=AQUIFERS

PF7=SCROLL UP

PF8=SCROLL DOWN

PF9=CAPACITY

PF24=HELP

CLEAR=EXIT

NO SUMMARY GEOLOGY: ENTER DATA TO ADD OR SELECT NEXT FUNCTION

M200M168

AQUIFERS (MWSI)

PWS: CEDAR FALLS

SITE ID: 0709084-08

COUNTY: BLACK HAWK

NAME: 9

W NO:

USGS ID:

AQUIFERS

AQUIFERS (CONTINUED)

340DVSL

DEVONIAN-SILURIAN SYS

PF1=MAIN MENU

PF2=WELL

PF3=COMMENTS

PF4=GEOLOGY

PF5=CASING

PF9=CAPACITY TESTS

PF24=HELP

CLEAR=EXIT

GEOLOGICAL UNIT				DEPTH		ELEV.	THICK-	CONTACT	ACCURACY		LITHOLOGY			
SYSTEM	SERIES	GROUP	FORMAT	MEMBER	TOP	BOT	OF TOP	NESS	SOURCE	TOP	BOT	PRIMARY	SECONDARY	MINOR
<hr/>														
COUNTY: BLACK HAWK			SEQUENCE 1 (F)											
LOCATION: NE NW NE SE 5 T089N R13W			LAT. & LONG.: 42 32 53N 92 23 59W		W-NUMBER: 04413		DEPTH: 125		ELEVATION: 870 (Alt.)					
Quatern Pleistoc					0	54	870	54	Samples	good	good	Till	Clay	Sand
Devonian Middle	-----	Cedar Va	Solon		54	125*	816	71*	Samples	good		Limestone	Chert	
<hr/>														
COUNTY: BLACK HAWK			SEQUENCE 2 (G)											
LOCATION: NE SE 9 T089N R13W			LAT. & LONG.: 42 32 00W 92 22 40W		W-NUMBER: 02641		DEPTH: 204		ELEVATION: 866 (Alt.)					
				sample gap	0	100	866	100						
Devonian Middle	-----	Cedar Va	Solon		100	115	766	15	Samples	poor	good	Limestone		
				Wapsipin Davenprt	115	140	751	25	Samples	good	good	Limestone		
				Spring G	140	145	726	5	Samples	good	good	Limestone	Dolonite	
				Kenwood	145	165	721	20	Samples	good	good	Dolonite	Limestone	Shale
Carboniferous	-----				165	204*	601	39*	Samples	good		Dolonite	Chert	
<hr/>														
COUNTY: BLACK HAWK			SEQUENCE 3											
LOCATION: NW NE 19 T089N R13W			LAT. & LONG.: 42 30 40W 92 25 20W		W-NUMBER: 01923		DEPTH: 141		ELEVATION: 955 (Alt.)					
Quatern Pleistoc					0	90	955	90	Samples	good	good	Till		
Devonian Middle	-----	Cedar Va	Rapid		90	141*	865	51*	Samples	good		Limestone	Chert	
<hr/>														
COUNTY: BLACK HAWK			SEQUENCE 4											
LOCATION: NE NE NW NW 3 T089N R14W			LAT. & LONG.: 42 33 21N 92 29 21W		W-NUMBER: 11653		DEPTH: 160		ELEVATION: 905 (Alt.)					
Quatern Pleistoc					0	70	905	70	Samples	good	good	Till	Sd & Grav	
Devonian Middle	-----	Cedar Va	Rapid		70	125	835	55	Samples	good	fair	Dolonite	Chert	
				Solon	125	155*	780	30*	Samples	fair		Dolonite	Limestone	
				sample gap	155	160	750	5						
<hr/>														
COUNTY: BLACK HAWK			SEQUENCE 5											
LOCATION: NW NE NW SW 3 T089N R14W			LAT. & LONG.: 42 32 54N 92 29 25W		W-NUMBER: 30061		DEPTH: 125		ELEVATION: 944 (Alt.)					
Quatern Pleistoc					0	83	944	83	Drl Log	fair	fair	Clay		
Devonian Middle	-----	Cedar Va	Coralvil		83	125*	861	42*	Drl Log	fair		Limestone		
<hr/>														
COUNTY: BLACK HAWK			SEQUENCE 6 (H)											
LOCATION: NE NE SE 11 T089N R14W			LAT. & LONG.: 42 32 03N 92 27 20W		W-NUMBER: 17610		DEPTH: 175		ELEVATION: 930 (Alt.)					
Quatern Pleistoc					0	80	930	80	Samples	good	good	Till	Sd & Grav	Sand
Devonian Middle	-----	Cedar Va	Coralvil		80	95	850	15	Samples	good	fair	Limestone		
				Rapid	95	165	835	70	Samples	fair	good	Limestone	Dolonite	Chert

(Record continues on next page)

\* ASTERISK SIGNIFIES PARTIAL PENETRATION

COUNTY: 7 BLACK HAWK

930  
-170  
760

GEOLOGICAL UNIT				DEPTH		ELEV.	THICK-	CONTACT	ACCURACY		LITHOLOGY			
SYSTEM	SERIES	GROUP	FORMATN	MEMBER	TOP	BOT	OF TOP	NESS	SOURCE	TOP	BOT	PRIMARY	SECONDARY	MINOR
				Solon	165	170*	765	5*	Samples	good		Limestone		
				sample gap	170	175	760	5						
-----														
COUNTY: BLACK HAWK				SEQUENCE		7								
LOCATION: SW SW SE 12 T089N R14W				LAT. & LONG.: 42 31 41N 92 26 37W			N-NUMBER: 04019		DEPTH: 125		ELEVATION: 838 (Alt.)			
Quaternary	Pleistoc	Holocene	Recent		0	5	858	5	Dril Log	fair	fair	Soil-Fill		
			undiff		5	70	853	65	Samples	good	good	Sand	Till	Clay
Devonian	Middle	-----	Cedar Va		70	125*	788	55*	Samples	good		Limestone	Dolomite	Sandstone
-----														
COUNTY: BLACK HAWK				SEQUENCE		8								
LOCATION: SW SE SE 12 T089N R14W				LAT. & LONG.: 42 31 42N 92 26 20W			N-NUMBER: 04216		DEPTH: 175		ELEVATION: 852 (Alt.)			
				sample gap	0	40	852	48						
Devonian	Middle	-----	Cedar Va Rapid		40	95	812	55	Samples	poor	good	Limestone	Dolomite	Chert
			Solon		95	155	757	60	Samples	good	good	Limestone	Chert	
			Wapsipin		155	165*	697	16*	Samples	good		Limestone	Chert	
			Spring G		165	175*	687	16*	Samples	good		Limestone	Chert	
-----														
COUNTY: BLACK HAWK				SEQUENCE		9								
LOCATION: NW NE NW NW 14 T089N R14W				LAT. & LONG.: 42 31 37N 92 28 19W			N-NUMBER: 02664		DEPTH: 157		ELEVATION: 954 (Alt.)			
Quaternary	Pleistoc				0	83	954	83	Samples	good	good	fill	Clay	
Devonian	Middle	-----	Cedar Va		83	157*	871	74*	Samples	good		Limestone	Chert	
-----														
COUNTY: BLACK HAWK				SEQUENCE		10								
LOCATION: NW SE SE 14 T089N R14W				LAT. & LONG.: 42 30 57N 92 27 28W			N-NUMBER: 18612		DEPTH: 205		ELEVATION: 922 (Alt.)			
Quaternary	Pleistoc	Holocene	Recent		0	5	922	5	Samples	good	good	Soil-Fill		
			undiff		5	82	917	77	Samples	good	good	fill		
Devonian	Middle	-----	Cedar Va Coralvil		82	130	840	48	Samples	good	good	Limestone		
			Rapid		130	190	792	60	Samples	good	poor	Dolomite	Chert	Limestone
			Solon		190	200*	732	10*	Samples	poor		Limestone	Dolomite	
			sample gap		200	205	722	5						
-----														
COUNTY: BLACK HAWK				SEQUENCE		11								
LOCATION: SE SE SE 14 T089N R14W				LAT. & LONG.: 42 30 49N 92 27 22W			N-NUMBER: 18712		DEPTH: 195		ELEVATION: 930 (Alt.)			
Quaternary	Pleistoc	Holocene	Recent		0	5	930	5	Samples	good	good	Soil-Fill		
			undiff		5	90	925	85	Samples	good	good	fill		
Devonian	Middle	-----	Cedar Va Coralvil		90	135	840	45	Samples	good	good	Limestone		
			Rapid		135	170	795	35	Samples	good	poor	Dolomite	Limestone	Chert
			Solon		170	185*	760	15*	Samples	poor		Limestone		

(Record continues on next page)

\* ASTERISK SIGNIFIES PARTIAL PENETRATION

COUNTY: 7 BLACK HAWK



GEOLOGICAL UNIT				DEPTH		ELEV.	THICK-	CONTACT	ACCURACY		LITHOLOGY			
SYSTEM	SERIES	GROUP	FORMAT	MEMBER	TOP	BOT	OF TOP	NESS	SOURCE	TOP	BOT	PRIMARY	SECONDARY	MINOR
sample gap					185	195	745	10						
COUNTY: BLACK HAWK				SEQUENCE	12									
LOCATION: NE NW NW 24 T089N R14W				LAT. & LONG.:	42 30 42N 92 27 05W									
					N-NUMBER: 09405 DEPTH: 35 ELEVATION: 878 (Alt.)									
Quatern Pleistoc					0	30	878	30	Samples	good	good	Sd & Grav	Silt	
Devonian Middle ----- Cedar Va Coralvill					30	35*	848	5*	Samples	good		Limestone		
COUNTY: BLACK HAWK				SEQUENCE	13									
LOCATION: SW SW SW 9 T090N R13W				LAT. & LONG.:	42 36 52N 92 23 35W									
					N-NUMBER: 09433 DEPTH: 176 ELEVATION: 979 (Alt.)									
Quatern Pleistoc					0	83	979	83	Samples	good	good	Fill		
Devonian Middle ----- Cedar Va Coralvill					83	115	896	32	Samples	good	fair	Limestone	Dolonite	
Rapid					115	176*	864	61*	Samples	fair		Dolonite	Limestone	Chert
COUNTY: BLACK HAWK				SEQUENCE	14									
LOCATION: NW NE NW 26 T090N R13W				LAT. & LONG.:	42 34 59N 92 20 56W									
					N-NUMBER: 09176 DEPTH: 107 ELEVATION: 900 (Alt.)									
Quatern Pleistoc					0	15	900	15	Samples	good	good	Fill	Sd & Grav	
Devonian Middle ----- Cedar Va Rapid					15	107*	885	92*	Samples	good		Dolonite	Limestone	Chert
COUNTY: BLACK HAWK				SEQUENCE	15									
LOCATION: SW SE SW 27 T090N R13W				LAT. & LONG.:	42 34 14N 92 22 07W									
					N-NUMBER: 08175 DEPTH: 105 ELEVATION: 908 (Alt.)									
sample gap					0	65	908	65						
Devonian Middle ----- Cedar Va Rapid					65	105*	843	40*	Samples	poor		Dolonite	Chert	
COUNTY: BLACK HAWK				SEQUENCE	16 (I)									
LOCATION: NE NW NE NE 29 T090N R13W				LAT. & LONG.:	42 35 04N 92 24 00W									
					N-NUMBER: 18103 DEPTH: 120 ELEVATION: 935 (Topo)									
Quatern Pleistoc Holocene Recent					0	5	935	5	Samples	good	good	Alluvium		
undiff					5	105	930	100	Samples	good	good	Fill	Sand	Sd & Grav
Devonian Middle ----- Cedar Va					105	120*	830	15*	Samples	good		Dolonite		
COUNTY: BLACK HAWK				SEQUENCE	17									
LOCATION: NE NW NE 23 T090N R13W				LAT. & LONG.:	42 35 01N 92 24 02W									
					N-NUMBER: 09207 DEPTH: 113 ELEVATION: 925 (Alt.)									
Quatern Pleistoc					0	85	925	85	Samples	good	good	Fill		
Devonian Middle ----- Cedar Va Rapid					85	113*	840	28*	Samples	good		Dolonite	Limestone	

\* ASTERISK SIGNIFIES PARTIAL PENETRATION

COUNTY: 7 BLACK HAWK

GEOLOGICAL UNIT				DEPTH		ELEV.	THICK-	CONTACT	ACCURACY		LITHOLOGY				
SYSTEM	SERIES	GROUP	FORMAT	MEMBER	TOP	BOT	OF TOP	NESS	SOURCE	TOP	BOT	PRIMARY	SECONDARY	MINOR	
<hr/>															
COUNTY: BLACK HAWK				SEQUENCE		18									
LOCATION: NE SW NE SW 24 T090N R14W				LAT. & LONG.:		42 35 21N 92 26 46W		W-NUMBER: 08459		DEPTH: 117		ELEVATION: 879 (Alt.)			
Quatern Pleistoc					0	100		879	100	Samples	good	good	Sd & Grav	Till	Sand
Devonian Middle				----- Cedar Va Rapid	100	117*		779	17*	Samples	good		Chert	Sd & Grav	Dolomite
<hr/>															
COUNTY: BLACK HAWK				SEQUENCE		19 (J)									
LOCATION: NW SW SW 25 T090N R14W				LAT. & LONG.:		42 34 24N 92 27 10W		W-NUMBER: 14446		DEPTH: 128		ELEVATION: 876 (Alt.)			
Quatern Pleistoc Holocene Recent					0	5		876	5	Samples	good	good			
undiff					5	90		871	85	Samples	good	good	Sd & Grav	Sand	Till
Devonian Middle				----- Cedar Va Rapid	90	100		786	10	Samples	good	good	Dolomite		
				Solon	100	128*		776	28*	Samples	good		Limestone		
<hr/>															
COUNTY: BLACK HAWK				SEQUENCE		20									
LOCATION: SE NW 36 T090N R14W				LAT. & LONG.:		42 33 50N 92 26 50W		W-NUMBER: 10605		DEPTH: 150		ELEVATION: 869 (Alt.)			
Quatern Pleistoc Wisconsin Loess					0	5		869	5	Samples	good	good	Loess		
undiff					5	115		864	110	Samples	good	good	Silt	Sand	Till
Devonian Middle				----- Cedar Va Rapid	115	140		754	25	Samples	good	good	Dolomite	Chert	
				Solon	140	150*		729	10*	Samples	good		Limestone		

APPENDIX E  
MATERIAL SAFETY DATA SHEETS

BIG WOODS AUTO  
EPA ID# IAD981711948

TDD #F-07-9004-010  
PAN #FIA0263RA

# MATERIAL SAFETY DATA SHEET

September 1, 198

## LUCITE® ACRYLIC LACQUER

### Section I

#### Manufacturer

E. I. du Pont de Nemours & Co. (Inc.)  
 Finishes & Fabricated Products Dept.  
 Wilmington, Delaware 19898  
 Telephone: Product information (800) 441-7515  
 Medical emergency (800) 441-3637  
 Transportation emergency (800) 424-9300  
 (CHEMTREC)

Product: Lucite acrylic lacquer  
 D.O.T. Hazard Class: Flammable Liquid  
 Paint UN 1263

### Section II — Hazardous Ingredients (See Section X for information on selected products which have additional ingredients)

Primary Ingredients	CAS No.	Vapor Pressure (20°C mm Hg.)	Exposure Limits*
Toluene	108-88-3	29	100ppm-A, 200ppm-0
Primary Amyl Acetate	628-63-7	4	100ppm-A
Xylene	1330-20-7	8	100ppm-A, 0
1-Methoxy-2-Propanol			
Acetate	108-65-6	2.4	100ppm-D
Acrylic Resin	None	None	None

\*A = ACGIH TLV O = OSHA D = Du Pont internal limit

### Section III — Physical Data

Evaporation rate: Slower than ether  
 Vapor density: Heavier than air  
 Solubility in water: Slight  
 Percent volatile: 63.4-84.0% (By volume)  
 Approximate boiling range: 129°F-401°F  
 Density: 7.6-11.1 #/gallon

### Section IV: Fire & Explosion Data

Flash point (Method): 20-73F (Closed cup).  
 Approx. flammable limits: 1.1-14%.  
 Extinguishing media: Foam, carbon dioxide, dry chemical  
 Special fire fighting procedures: Full protective equipment, including self-contained breathing apparatus, is recommended. Water from fog nozzles may be used to cool closed containers to prevent pressure build up.  
 Unusual fire & explosion hazards: When heated above the flash point, emits flammable vapors which, when mixed with air, can burn or be explosive. Fine mists or sprays may be flammable at temperatures below the flash point.

### Section V — Health Hazard Data (See Also Section X Notes)

Ingestion: Gastro-intestinal distress.  
 In the unlikely event of ingestion, call a physician immediately and have names of ingredients available.  
 Inhalation: May cause nose and throat irritation. May cause nervous system depression characterized by the following

progressive steps: headache, dizziness, nausea, staggering gait, confusion, unconsciousness. 1-Methoxy-2-propanol acetate may cause moderate eye burning and can be absorbed through the skin in harmful amounts. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists, or occurs later, consult a physician.

Skin or eye contact: May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.  
 In case of eye contact, immediately flush with plenty of water for at least 15 minutes; call a physician.  
 In case of skin contact wash with soap and water. If irritation occurs, contact a physician.

### Section VI — Reactivity Data

Stability: stable  
 Incompatibility (materials to avoid): none reasonably foreseeable  
 Hazardous decomposition products: CO, CO<sub>2</sub>, smoke, oxides of heavy metals reported in Section X  
 Hazardous polymerization: will not occur

### Section VII — Spill or Leak Procedures

Steps to be taken in case material is released or spilled:  
 Ventilate area. Remove sources of ignition. Prevent skin contact and breathing of vapor. Confine and remove with inert absorbant.  
 Waste disposal method: Do not allow material to contaminate ground water systems. Incinerate absorbed material in accordance with federal, state and local requirements. Do not incinerate in closed containers.

### Section VIII — Special Protection Information

Respiratory: Do not breathe vapors or mists.  
 Wear a properly fitted vapor/particulate respirator approved by NIOSH/MSHA (TC-23C) for use with paints during application and until all vapors and spray mist are exhausted. Follow the respirator manufacturer's directions for respirator use.  
 Ventilation: Provide sufficient ventilation in volume and pattern to keep contaminants below applicable OSHA requirements.  
 Protective clothing: Neoprene gloves and coveralls are recommended.  
 Eye protection: Desirable in all industrial situations. Include splash guards or side shields.

### Section IX — Special Precautions

Precautions to be taken in handling and storing: Observe label precautions. Keep away from heat, sparks and flame. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating or smoking. Do not store above 120°F.

April 15, 1987

# MATERIAL SAFETY DATA SHEET

## LACQUER THINNERS AND CLEANING SOLVENTS

### Section I

#### Manufacturer

E. I. du Pont de Nemours & Co. (Inc.)  
Automotive Products Dept.  
Wilmington, Delaware 19898  
Telephone: Product information (800) 441-7515  
Medical emergency (800) 441-3637  
Transportation emergency (800) 424-9300  
(CHEMTREC)

Product: Lacquer Thinners and Cleaning Solvents

D.O.T. Hazard Class: Flammable Liquid  
Paint Related Material NA 1263

Hazardous Materials Identification System:

H = 2, F = 3, R = 0.

### Section II — Hazardous Ingredients (See Section X for ingredients listed by product code)

Ingredients	CAS No.	Vapor Pressure (20°C mm Hg.)	Exposure Limits*
1. Butyl acetate	123-86-4	8	150ppm-A, O; 200ppm-A-(STEL)
* 2. N-Butyl alcohol	71-36-3	5.5	100ppm-A; 25ppm-D; 50ppm-C, A
* 3. Acetone	67-64-1	184	750ppm-A; 1000ppm-O; 1000ppm-A-(STEL)
4. Methyl alcohol	67-56-1	100	200ppm-A, O, D; 250ppm-A-(STEL)
* 5. Toluene	108-88-3	36.7	100ppm-A, 200ppm-O; 150ppm-A-(STEL); 300ppm-C-O
* 6. Isopropyl alcohol	67-63-0	33	400ppm-A, O; 500ppm-A-(STEL)
* 7. Dibasic esters			
a) Dimethyl glutarate	119-40-0		
b) Dimethyl succinate	106-65-0	14 (at 100°C)	10mg/m <sup>3</sup> -D
c) Dimethyl adipate	627-93-0		
* 8. Propylene glycol monomethyl ether acetate	108-65-6	3.8	Unknown
* 9. Ethylene glycol monobutyl ether acetate	112-07-2	0.3	25ppm-S; 20ppm-O
10. Xylene	1330-20-7	25	100ppm-A, O; 150ppm-A-(STEL)
* 11. Aromatic hydrocarbon	64742-95-6	10	25ppm-O; 50ppm-D
* 12. VM&P naphtha	64742-89-8	15	100ppm-D; 300ppm-A; 500ppm-O
13. Medium mineral spirits	64742-88-7	10	100ppm-A, D; 500ppm-O

\* A = ACGIH TLV, O = OSHA, D = Du Pont internal limit,  
S = Supplier Furnished Limit, STEL = Short Term Exposure  
Limit (15 mins.), C = Ceiling

### Section III — Physical Data

Evaporation rate: Slower than ether  
Solubility in Water: Miscible  
Vapor Density: Heavier than air  
Boiling Range: 54-225°F

Gal. Weight (#/Gal): 6.54-7.76  
Volume % volatile: 100  
Weight % volatile: 100  
V.O.C. (#/Gal): 6.54-7.76

### Section IV — Fire & Explosion Data

Flash point (Closed cup): Below 20°F: 3602S, 3608S, 3613S,  
3642S, 3661S, 3696S, 3924S; 20-73°F: 3939S, 73-100°F:  
3919S, 3929S; Above 100°F: 3979S

Approx. flammable limits: 0.8-36.5 percent.

Extinguishing media: Water spray, foam, carbon dioxide, dry chemical.

Special fire fighting procedures: Full protective equipment, including self-contained breathing apparatus, is recommended. Water from fog nozzles may be used to cool closed containers to prevent pressure build up.

Unusual fire & explosion hazards: When heated above the flash point, emits flammable vapors which, when mixed with air, can burn or be explosive. Fine mists or sprays may be flammable at temperatures below the flash point.

### Section V — Health Hazard Data

#### General effects

Ingestion: Gastro-intestinal distress.

In the unlikely event of ingestion, call a physician immediately and have the names of ingredients available.

Inhalation: May cause nose and throat irritation. Repeated and prolonged overexposure to solvents may lead to permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are all signs that solvent levels are too high.

If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists, or occurs later, consult a physician.

Skin or eye contact: May cause irritation or burning of the eyes.

Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

In case of eye contact, immediately flush with plenty of water for at least 15 minutes; call a physician.

In case of skin contact, wash with soap and water. If irritation occurs, contact a physician.

#### Specific effects

Butyl Acetate: Extremely high concentrations have caused blood changes and weakness in laboratory animals. N-Butyl Alcohol: Liquid splashes in the eye may result in chemical burns. Methyl Alcohol: Excessive human exposure to Methanol may lead to fatigue, headache, anaesthetic, neurologic effects, and visual difficulties including blindness or death. Recurrent overexposure may result in liver and kidney injury. Can be absorbed through the skin in harmful amounts. Toluene: Recurrent overexposure may result in liver and kidney injury. High airborne levels have produced irregular heart beats in animals and occasional palpitations in humans. Rats exposed to very high airborne levels have exhibited high frequency hearing deficits. The significance of this to man is unknown. Isopropyl Alcohol: Ingestion studies on laboratory animals showed that very high oral doses caused increased liver and kidney weights. High oral doses have caused anemia in laboratory animals. Dibasic Esters: High airborne levels in rats have shown mild injury to the olfactory region of the nose. Propylene Glycol Monomethyl Ether Acetate: May cause moderate eye burning. Recurrent overexposure may result in liver and kidney injury.

# MATERIAL SAFETY DATA SHEET

FOR COATINGS, RESINS AND RELATED MATERIALS

NPCA 1-72

Date of PREP: 10/20/83

(Similar to Form OSHA-2

## SECTION I

Manufacturer's Name: PPG Industries, Inc. Coatings & Resins Group

Address: 3800 W. 143rd Street -Cleveland, Oh 44111

Attn: Technical Manager, AutoRefinish

Emergency Telephone: (304) 843-1300

Product Class: SOLVENT BLEND

Manufacturer Code: DTL10

Trade Name: LACQUER THINNER

(122082D)

## SECTION II - HAZARDOUS INGREDIENTS

INGREDIENTS	% WEIGHT	*TLV(1984)	**PPG IPEL	CASNO	LEL	V.P.
TOLUENE	45	100.00	PPM	108-88-3	1.2	22.4
2-PROPANONE	20	750.00	PPM	67-64-1	2.6	186.0
ALIPHATIC HYDROCARBON	15	.NE	.	64742-89-8	1.2	120
ISOPROPYL ALCOHOL, ANHYDROUS	15	400.00	PPM	67-63-0	2.0	33
PROPYLENE GLYCOL METHYL ETHER ACETATE	< 5	.NE	.	108-65-6	1.3	3.7

## SECTION III - PHYSICAL DATA

Boiling Range: 57-110 DEG.C.

Vapor Density - HEAVIER THAN AIR

Evaporation Rate - SLOWER THAN ETHER % Volatile/Vol: 100.0 Wt/Gal: 6.65

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

DOT Category: EXTREMELY FLAMMABLE

Flashpoint: 4.00 DEG.F. PMCC

LEL: 1.5

Extinguishing Media:

USE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CLASS B EXTINGUISHERS (CARBON DIOXIDE, DRY CHEMICAL OR ALCOHOL FOAM) DESIGNED TO EXTINGUISH NFPA CLASS IB FLAMMABLE LIQUID FIRES.

Unusual Fire & Explosion Hazards:

KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, ELECTRICAL EQUIPMENT, SPARKS AND OPEN FLAME. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT. DO NOT APPLY ON HOT SURFACES.

Special Fire Fighting Procedures:

WATER SPRAY MAY BE INEFFECTIVE. WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTOIGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE.

## SECTION V - HEALTH HAZARD DATA

Threshold Limit Value: SEE SEC. II

Effects of Overexposure:

INHALATION: ANESTHETIC. IRRITATION OF THE RESPIRATORY TRACT OR ACUTE NERVOUS SYSTEM DEPRESSION CHARACTERIZED BY THE FOLLOWING PROGRESSIVE STEPS: HEADACHE, DIZZINESS, STAGGERING GAIT, CONFUSION, UNCONSCIOUSNESS, OR COMA.  
SKIN OR EYE CONTACT: PRIMARY IRRITATION.

Emergency and First Aid Procedures:

FUMES: REMOVE FROM EXPOSURE. RESTORE BREATHING. KEEP WARM AND QUIET. NOTIFY A PHYSICIAN. SPLASH (EYES): FLUSH IMMEDIATELY WITH COPIOUS QUANTITIES OF RUNNING WATER FOR AT LEAST 15 MINUTES. TAKE TO A PHYSICIAN FOR DEFINITIVE MEDICAL TREATMENT. SPLASH (SKIN): WASH AFFECTED AREAS WITH WATER. REMOVE CONTAMINATED CLOTHING. CONSULT A PHYSICIAN.

## SECTION VI - REACTIVITY DATA

STABILITY: STABLE Conditions to Avoid: UNKNOWN

Incompatibility (Materials to Avoid): UNKNOWN

Hazardous Decomposition Products:

May produce hazardous fumes when heated to decomposition.

Fumes may contain: Carbon Monoxide and

Hazardous Polymerization - WILL NOT OCCUR

CONDITIONS TO AVOID: UNKNOWN



REMOVE ALL SOURCES OF IGNITION (FLAMES, HOT SURFACES, AND ELECTRICAL, STATIC, OR FRICTIONAL SPARKS). AVOID BREATHING VAPORS. VENTILATE AREA. REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS.

**Waste Disposal Method:**

DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS.

**SECTION VIII - SPECIAL PROTECTION INFORMATION****Respiratory Protection:**

FOR EMERGENCIES OR WORKING IN CONFINED AREAS, WEAR SELF-CONTAINED BREATHING APPARATUS OR SUPPLIED AIR RESPIRATORY PROTECTION. IN OTHER CIRCUMSTANCES INVOLVING POTENTIAL OVER EXPOSURES, USE MSHA-APPROVED ORGANIC VAPOR RESPIRATOR.

**Ventilation:**

PROVIDE GENERAL DILUTION OR LOCAL EXHAUST VENTILATION IN VOLUME AND PATTERN TO KEEP THE CONCENTRATION OF HAZARDOUS INGREDIENTS IN SEC.II BELOW THE LOWEST SUGGESTED EXPOSURE LIMIT, AND LEL IN SEC.IV BELOW STATED LIMIT.

**Protective Gloves:**

REQUIRED FOR PROLONGED OR REPEATED CONTACT.

**Eye Protection:**

USE SAFETY EYEWEAR DESIGNED TO PROTECT AGAINST SPLASH OF LIQUIDS.

**Other Protective Equipment:**

PREVENT PROLONGED SKIN CONTACT TO CONTAMINATED CLOTHING.

**SECTION IX - SPECIAL PRECAUTIONS****Precautions to be Taken in Handling and Storing:**

DO NOT STORE ABOVE 120 F. STORE LARGE QUANTITIES IN BUILDINGS DESIGNED AND PROTECTED FOR STORAGE OF NFPA CLASS IB FLAMMABLE LIQUIDS.

**Other Precautions:**

REPEATED OVEREXPOSURES TO SOLVENT VAPORS MAY CAUSE PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS CAN BE HARMFUL OR FATAL. EYE WATERING, HEADACHES, OR DIZZINESS ARE INDICATIONS THAT SOLVENT LEVELS ARE TOO HIGH. OVEREXPOSURE MAY BE PREVENTED BY ENSURING VENTILATION CONTROLS, VAPOR EXHAUST OR FRESH AIR ENTRY. PROTECTIVE DEVICES SUCH AS A RESPIRATOR (MINIMUM NIOSH/MSHA TC-23C SPECIFICATION), GLOVES AND CLOTHING MAY ALSO LIMIT EXPOSURE.

DO NOT TAKE INTERNALLY. CONTAINERS SHOULD BE GROUNDED WHEN POURING. AVOID FREE FALL OF LIQUID IN EXCESS OF A FEW INCHES.



# MATERIAL SAFETY DATA SHEET

## FOR COATINGS, RESINS AND RELATED MATERIALS

NPCA 1-72

Date of PREP: 01/14/85

(Similar to Form OSHA-201)

### SECTION I

Manufacturer's Name: PPG Industries, Inc. Coatings & Resins Group  
Address: 3800 W. 143rd Street -Cleveland, Oh 44111  
Attn: Technical Manager, AutoRefinish  
Emergency Telephone: (304) 843-1300

Product Class: SOLVENT BLEND

Manufacturer Code: DTL16

Trade Name: ALL PURPOSE LACQUER THINNER

(030684D)

### SECTION II - HAZARDOUS INGREDIENTS

INGREDIENTS	% WEIGHT	*TLV(1984)	**PPG IPEL	CASNO	LEL	V.P.
2-PROPANONE	30	750.00	PPM	67-64-1	2.6	186.0
TOLUENE	20	100.00	PPM	108-88-3	1.2	22.4
ALIPHATIC HYDROCARBON	15	.NE		64742-89-8	1.2	120
XYLENE	15	100.00	PPM	1330-20-7	1.1	6.3
ISOPROPYL ALCOHOL, ANHYDROUS	10	400.00	PPM	67-63-0	2.0	33
PROPYLENE GLYCOL METHYL ETHER ACETATE	5	.NE		108-65-6	1.3	3.7

### SECTION III - PHYSICAL DATA

Boiling Range: 57-145 DEG.C.

Vapor Density - HEAVIER THAN AIR

Evaporation Rate - SLOWER THAN ETHER % Volatile/Vol: 100.0 Wt/Gal: 6.63

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA

DOT Category: EXTREMELY FLAMMABLE

Flashpoint: 5 DEG.F. PMCC

LEL: 1.6

Extinguishing Media:

USE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CLASS B  
EXTINGUISHERS (CARBON DIOXIDE, DRY CHEMICAL OR ALCOHOL FOAM)  
DESIGNED TO EXTINGUISH NFPA CLASS IB FLAMMABLE LIQUID FIRES.

Unusual Fire &amp; Explosion Hazards:

KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, ELECTRICAL  
EQUIPMENT, SPARKS AND OPEN FLAME. CLOSED CONTAINERS MAY EXPLODE  
WHEN EXPOSED TO EXTREME HEAT. DO NOT APPLY ON HOT SURFACES.

Special Fire Fighting Procedures:

WATER SPRAY MAY BE INEFFECTIVE. WATER MAY BE USED TO COOL CLOSED  
CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE AUTOIGNITION  
OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT. IF WATER IS USED, FOG  
NOZZLES ARE PREFERABLE.

### SECTION V - HEALTH HAZARD DATA

Threshold Limit Value: SEE SEC. II

Effects of Overexposure:

INHALATION: ANESTHETIC. IRRITATION OF THE RESPIRATORY TRACT OR  
ACUTE NERVOUS SYSTEM DEPRESSION CHARACTERIZED BY THE FOLLOWING  
PROGRESSIVE STEPS: HEADACHE, DIZZINESS, STAGGERING GAIT,  
CONFUSION, UNCONSCIOUSNESS, OR COMA.  
SKIN OR EYE CONTACT: PRIMARY IRRITATION.

Emergency and First Aid Procedures:

FUMES: REMOVE FROM EXPOSURE. RESTORE BREATHING. KEEP WARM AND  
QUIET. NOTIFY A PHYSICIAN. SPLASH (EYES): FLUSH IMMEDIATELY WITH  
COPIOUS QUANTITIES OF RUNNING WATER FOR AT LEAST 15 MINUTES. TAKE  
TO A PHYSICIAN FOR DEFINITIVE MEDICAL TREATMENT. SPLASH (SKIN):  
WASH AFFECTED AREAS WITH WATER. REMOVE CONTAMINATED CLOTHING.  
CONSULT A PHYSICIAN.

### SECTION VI - REACTIVITY DATA

STABILITY: STABLE Conditions to Avoid: UNKNOWN

Incompatibility (Materials to Avoid): UNKNOWN

Hazardous Decomposition Products:

May produce hazardous fumes when heated to decomposition.  
Fumes may contain: Carbon Monoxide and

Hazardous Polymerization - WILL NOT OCCUR

CONDITIONS TO AVOID: UNKNOWN

REMOVE ALL SOURCES OF IGNITION (FLAMES, HOT SURFACES, AND ELECTRICAL, STATIC, OR FRICTIONAL SPARKS). AVOID BREATHING VAPORS. VENTILATE AREA. REMOVE WITH INERT ABSORBENT AND NON-SPARKING TOOLS.

**Disposal Method:**

DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. DO NOT INCINERATE CLOSED CONTAINERS.

**SECTION VIII - SPECIAL PROTECTION INFORMATION**

**Respiratory Protection:**

FOR EMERGENCIES OR WORKING IN CONFINED AREAS, WEAR SELF-CONTAINED BREATHING APPARATUS OR SUPPLIED AIR RESPIRATORY PROTECTION. IN OTHER CIRCUMSTANCES INVOLVING POTENTIAL OVER EXPOSURES, USE MSHA-APPROVED ORGANIC VAPOR RESPIRATOR.

**Ventilation:**

PROVIDE GENERAL DILUTION OR LOCAL EXHAUST VENTILATION IN VOLUME AND PATTERN TO KEEP THE CONCENTRATION OF HAZARDOUS INGREDIENTS IN SEC.II BELOW THE LOWEST SUGGESTED EXPOSURE LIMIT, AND LEL IN SEC.IV BELOW STATED LIMIT.

**Protective Gloves:**

REQUIRED FOR PROLONGED OR REPEATED CONTACT.

**Eye Protection:**

USE SAFETY EYEWEAR DESIGNED TO PROTECT AGAINST SPLASH OF LIQUIDS.

**Other Protective Equipment:**

PREVENT PROLONGED SKIN CONTACT TO CONTAMINATED CLOTHING.

**SECTION IX - SPECIAL PRECAUTIONS**

**Precautions to be Taken in Handling and Storing:**

DO NOT STORE ABOVE 120 F. STORE LARGE QUANTITIES IN BUILDINGS DESIGNED AND PROTECTED FOR STORAGE OF NFPA CLASS IB FLAMMABLE LIQUIDS.

**Other Precautions:**

REPEATED OVEREXPOSURES TO SOLVENT VAPORS MAY CAUSE PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS CAN BE HARMFUL OR FATAL. EYE WATERING, HEADACHES, OR DIZZINESS ARE INDICATIONS THAT SOLVENT LEVELS ARE TOO HIGH. OVEREXPOSURE MAY BE PREVENTED BY ENSURING VENTILATION CONTROLS, VAPOR EXHAUST OR FRESH AIR ENTRY. PROTECTIVE DEVICES SUCH AS A RESPIRATOR (MINIMUM NIOSH/MSHA TC-23C SPECIFICATION), GLOVES AND CLOTHING MAY ALSO LIMIT EXPOSURE.

DO NOT TAKE INTERNALLY. CONTAINERS SHOULD BE GROUNDED WHEN POURING. AVOID FREE FALL OF LIQUID IN EXCESS OF A FEW INCHES.

APPENDIX F  
TELEPHONE CONVERSATION RECORDS

BIG WOODS AUTO  
EPA ID# IAD981711948

TDD #F-07-9004-010  
PAN #FIA0263RA

# TELEPHONE CONVERSATION RECORD

DATE OF CALL: May 31, 1990 TIME OF CALL: 14:45

## PERSONS INVOLVED:

- 1) Kenley McCall, Ecology + Environment, Inc.
- 2) Perry Wolfensperger, Waterloo Municipal Airport; Fed. Aviation Adm.

PROJECT TITLE: Big Woods Auto (BWA) PROJECT NUMBER: FIA 0263RA

CLIENT: EPA / RCRA

SUBJECT OF CALL: Transformers + dielectric oil disposal, transformers  
presently stored at BWA.

RESUME OF CONVERSATION: Introduced myself and asked  
Mr. Wolfensperger if he was familiar with the  
fate of the dielectric oil from the transformers  
from the airport, now stored at BWA.

Mr. Wolfensperger had to check his files, he  
called back with the information. He said  
that the transformer oil had been tested for all  
of the transformers. He indicated that the  
units sent to BWA had all tested at < 50 ppm  
Polychlorinated Biphenyls (PCBs) while some had tested  
> 50 ppm PCBs. Wolfensperger indicated that Anderson  
Johnson, PO Box 42, Plainfield Indiana (subcontractor  
for electrical work) had handled disposal of oil. He  
said that < 50 ppm oil sent to reclaimer and contaminated  
oil properly disposed. He did not know company names.

SIGNATURE: \_\_\_\_\_

cc: Kenley McCall 5/31/90

# TELEPHONE CONVERSATION RECORD

DATE OF CALL 5/24/87 TIME OF CALL 08:20

PERSON CONTACTED Melvin Cunningham

COMPANY Big Woods Auto TITLE owner

SUBJECT OF CALL Waste mgmt TELEPHONE # 319-947-2634  
business 277-4324

CONVERSATION Introduced myself / company / EPA status and  
said that I called in relation to the RCRA-VSI we  
conducted last week. I asked Mr. Cunningham specific  
questions concerning waste management practices and history.

1) When were transformers brought onsite? ~ May, 1984

2) Who reclaimed or handled disposal of dielectric oil?

Perry Wolfensperger of Waterloo Municipal Airport handled  
disposal, he resides @ Route 2, Waverly, Iowa 319-947-2934

3) Who recycles lead-acid batteries?

Max Rotman Inc. Scrap Iron + Metal

211 N. Main St, Cedar Falls, Iowa 319-266-9442

4) Who recycles waste oil from junked cars?

Any one of several local service stations.

5) When were mobile homes brought onsite? 1983

6) When designate storage area in shop? ~1980

7) Is anti-freeze disposed of or recycled?

The small quantities generated are reused in  
personal vehicles or sold for reuse.

8) Estimate of annual quantities of waste fluids generated?

Anti-freeze : < 20 gallons per year (most reused)

Waste Oil : < 20 gallons per year (all recycled)

Paint Thinner : < 2 gallons per year

Mr. Cunningham indicated that he had requested Kim Purdum  
of the Regional IDNR inspect facility + this had been done  
on May 11, 1990. Cunningham said he had requested this inspection  
while attending a seminar on waste disposal in Waterloo, Iowa  
jointly conducted by IDNR + USEPA Region VII.

SIGNATURE Melvin Cunningham

DATE 5/24/90

# TELEPHONE CONVERSATION RECORD

DATE OF CALL: July 19, 1998 TIME OF CALL: 11:45 am

PERSONS INVOLVED: \_\_\_\_\_

- 1) Wesley McCall E+E/FIT
- 2) Robert J. Dieter, Attorney for BWA, 319-277-6838

PROJECT TITLE: Big Woods Auto (BWA) PROJECT NUMBER: FIA#263RA

CLIENT: EPA

SUBJECT OF CALL: Authorship of Closure/sample Plan for Big Woods Auto (BWA).

RESUME OF CONVERSATION: I introduced myself/company/contractor to Dieter and asked him if he knew who had written the Closure/sample Plan for BWA. Robert said that he had written the plan himself.

I asked him who had done the analysis of the sample they had collected independently. Dieter said that National Environmental Testing, Inc., of Cedar Falls had completed the analyses for metals & total hydrocarbons.

I thanked Mr. Dieter for the information we said good bye.

SIGNATURE: \_\_\_\_\_

CC: \_\_\_\_\_